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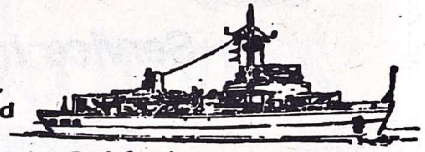

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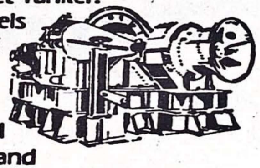

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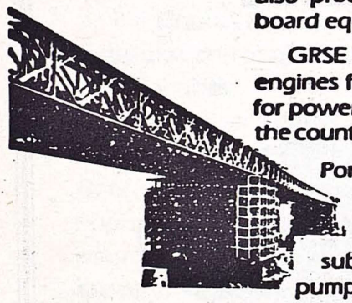

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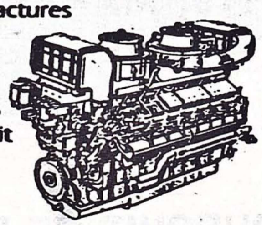

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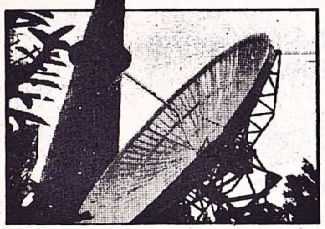
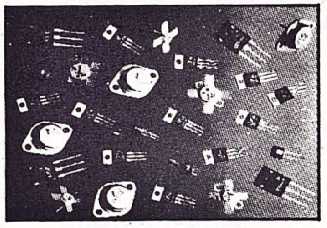
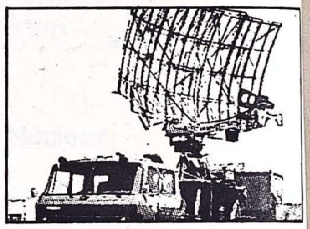

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		Bangladesh War	
2.	Jacob, JFR (Lt. Gen.)	Surrender at Dacca : Birth of a Nation 1997	
		Biography	
3.	Jarg, MS (Col)	After the Bear Hug	1997
4.	Roy, Arundhati	The God of Small Things	1997
5.	Dunant, Henry	A Memory of Solferino	1959
6.	Nehru, B.K.	Nice Guys Finish Second	1997
7.	Khanna, S.K.	Seasoned Diplomat to Scholar Prime Minister Profile of IK Gujral	1997
		Defence - Research	
8.	TIFAC	A Report on Defence Research and Development.	1997
		Foreign - Diplomats	
9.	Ministry of External Affairs, New Delhi	Diplomatic List Part I and II Jan. 1997	1997
		India	
10.	Subramaniam, Chitra	India is for Sale	1997

articles deal with various socio-economic and political aspects of the Arab world covering the period of late Nineteenth Century and first half of the Twentieth Century. Some of the noteworthy articles examine the feminist movement in Egypt and Lebanon, ethnic and sectarian problems of Iraq, interaction between the Wafd and the Muslim Brotherhood of Egypt and water resources of the Middle East. John P. Spagnola, the editor has a perceptive article on how the Western scholars have looked at the contemporary history of this region. Lastly, Mary Wilson has contributed a comprehensive bibliography of the published work of Albert Hourani. The book will be a valuable edition to any library having books on contemporary international affairs.

— Prof. K.R. Singh

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, three chairs have been instituted for one year projects, namely Field Marshal KM Cariappa Chair, Admiral RD Katari Chair and Air Marshal Subroto Mukherji Chair. A fourth chair, the Prof DS Kothari DRDO Chair is intended to be instituted shortly. 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.

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Leaders & Battles : The Art of Military Leadership. By W.J. Wood, *Novato, Presidio, 1984, p. 337, $ 15.95, ISBN 0-89141-560-2.*

Every war throws up heroes and lessons. That has been the case of battle of Haldighati to the Great Wars and the Gulf War of 1991. These lessons as one looks into the conceivable future revolutions in warfare through Information Technology and the Precision Guided Munitions, portend to show two things:one, the burden of leadership shall not change in any type of war; and two, there will always be men and women who will continue to create the euphemistic Carlyle type of hero-worship.

In Leaders and Battles : The Art of Military Leadership, Col WJ Wood recreates a serialised study highlighting the essentials of leadership in war-courage, valour and decisiveness. Around them hover other traits and qualities that show the overall character of a memorable leader. The study spans from BC 106 to 1914. Ilipa to Tangra are two large extremes transcended by technology gap of the millenniums with the exception of leadership constant. Strange but true. And that is what Wood establishes; so have all other historians. Age and time do not seem to have changed the human factors of leadership quotients and the man behind the gun. Wood sees what Napoleon saw in Australia or Hannibal at Carthage or Thimayya at Maungdaw: leadership matters and it has to be a front-line leadership. And whether one exploits imagination, boldness, tenacity, a fine judgement, or exhibit an indomitable will to inspire his command, it manifests the crucial quality of leadership of a successful leader that achieves the goal.

The book enviably examines each battle - some of which have hardly been heard earlier-and focus pointedly at a trait of the leader who succeeded. The two appendices add to the analysis that cover "Conclusions Deducible for the Text and Extended Range of Leaders and Battles". There is more. Wood makes an effective effort at dramatising some of the scenes. Some add romanticism to the study. There are flashes of literary acumen too. Observe a sentence: "Every Infantryman in every corps is drunk with exhaustion..." at p. 242, for example, is exhilarating.

A good book which is readable and sustainable-a fact seen from its reprint. It could be enjoyable too especially for those who, like, Mao Zedong, "accept lessons suitable to one", and discard the others.

— Brig Chandra B Khanduri, (Retd)

Problems of The Modern Middle East in Historical Perspective : Essays in Honour of Albert Hourani. Ed by John Spagnolo, *Berkshire, Ithaca, 1992, p. 309, £ 12.95, ISBN 0-86372-214-8.*

This book is a tribute paid by the scholars on the Middle East in honour of Professor Albert Hourani, a noted scholar on Arab affairs who was the Director of the Middle East Centre of St. Antony's College, Oxford. Fifteen

Tornado, that excelled in the Gulf War. There is even mention of the Eurofighter 2000 which is yet to enter service.

For the aviators everywhere, particularly those from the Indian Air Force, it would make fascinating reading. All the aircraft which the IAF acquired from the UK, find mention. From the Wapitis to Jaguars all are adequately covered. Also included are civil aircraft that have served the RAF in both peacetime and in war as well as all the missiles and nuclear weapons in use in that service. Some important service personalities also figure in the text. The photographs are plentiful and excellent throughout.

This is a very useful book of reference for defence libraries and those of aviation buffs.

— Cdr. S. Varma SC IN (Retd)

Bill Mauldin's Army - Bill Mauldin's Greatest World War II Cartoons, *Novato, Presidio Press, 1995, p. 384, $ 15.95, ISBN 0-89141-159-3.*

Mauldin's depictions of US Army's operations during World War II (mainly in Europe) through his cartoons, caricatures, characters and quips makes the book rare and one of its own kind.. The book energises the spring board of memory, even half a century later, in real terms the battle scenes, the trenches and the torches, the camps and the concentration areas, the captured and the conditions of captivity, the desire to escape or die. The new readers of later generation may miss the mirth and morbidity - its subtleties and nuances - but will certainly be able to capture the soldierly spirit, quality of leadership from a Private to a General, dig at the inevitable hardships and obstacles, the obvious as well as latent hazards, risks and dangers to life.

The straight and shaded lines and sketches project the topography in real terms i.e. the rain or rivers, the sands or sea shore, beaches or blue seas, the military hardware or the battle fatigues, Infantry, Cavalry or Artillery, the guns, grenades, cannons or rifles, rations, refreshments or PXs. The social millieu i.e. the rest periods recreation, refreshments, the bars and the messes, the etiquette and the discipline, the mixing and the segregation, are highlighted. The transit facilities, travels and the transients appear genuine and unbelievably real. Even the moods and tempers of the G.Is are discernible - whether they are advancing or retreating, assaulting or withdrawing, in boats or ships, Tanks or jeeps, marching or flying, victorious or vanquished, home sick or elated, decaying or dying, captured or evacuated, hospitalised or glorified.

Approximately 800 sketches, in various reprints despite their random arrangement, lend the book its uniqueness and make it worthy of its modest price.

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

EDITORIAL

Evolution of the Doctrine of Regional Co-operation

Diplomacy and defence, it is said, are the two sides of the same coin. Therefore, foreign and defence policies together, perhaps, could be termed as the National Security policy of the state designed to safeguard its vital interests. Even in the earlier history of Western strategic thought, Clausewitz clearly stated that war was merely the continuation of policy by other means. From these considerations, the close linkage between diplomacy and defence comes into sharp focus.

In India, with the experience of non-violent and successful struggle for Independence 50 years ago, foreign policy of peaceful co-operation in international affairs was predicated on "Non-alignment" and "Panch-sheel". This policy served the country well in a bi-polar world dominated by the two super powers, who led the two biggest military alliances in history : the NATO, and the Warsaw Pact.

After the end of the Cold War, a uni-polar world emerged with the United States of America as the only super power. This is now transforming itself into a multi-polar system and several regional powers are emerging on the scene. The trend towards regional groupings, like the European Union and ASEAN, is clearly shaping the paradigm of the new international order.

In South Asia, SAARC established more than a decade ago, is attempting to provide a forum in which the countries of the region can combine for speedy economic development. India being the major regional power has to play a positive role; and fully support measures which can bring peace and prosperity to the peoples of the region.

In this context, the recently declared doctrine of India's foreign policy based on earlier concepts of "Non-alignment" and "Panch-sheel", and taking into consideration the other dimensions of security - internal, economic, industrial, social, science and technology - in the changing world order is a welcome development.

This new foreign policy doctrine, a synthesis of our past policies with the needs of the present and a vision of the future in the regional perspective, has been posted with a rigour of objectivity and consummate skill by our Hon'ble Foreign Minister Shri I.K. Gujral in the lead article of this Journal. The "Gujral Doctrine" is likely to provide a creative and sound foundation for our National Security policies for the 21st century and aims at transforming the present approach to a system of regional co-operation.

Security Concerns in Asia in the Early 21st Century

I. K. GUJRAL, HON'BLE MINISTER FOR EXTERNAL AFFAIRS

Mr. Chairman, Distinguished Guests, Ladies and Gentlemen,

It is a privilege for me to address you on this occasion when the United Service Institution of India is completing 125 years. This organisation, set up in 1870, has played an important role in developing a tradition of serious debate and discussion on the important issues of national security and defence. It is also a source of satisfaction that on this occasion, the USI is organising a joint seminar with the Royal United Services Institute of the United Kingdom. This tradition of cooperation is important as we face the challenges of the coming century.

The decade of the 1990s has seen a profound transformation in the international security environment. The seeds of the Cold War had already been sown when India became independent 50 years ago. In the following decades, the Cold War became the predominant motif as countries sought to pursue their national security through competing military alliances. India, which had achieved independence through a non-violent struggle, that is unique in history, was determined to protect its independence in thought and action. This search for independence led us, in a logical manner, to the concept of non-alignment. Yet, there is no doubt that with the major powers engaged in an ideological conflict, the Cold War cast a shadow on international trends and developments. Multilateral institutions set up after the Second World War to help create a democratic and equitable world order, based on collective security, were often paralysed by the rivalry between USA and former USSR.

Today, the Cold War has ended. We are no longer faced with two opposing military alliances with their gigantic nuclear arsenals in a state of high alert. The threat perceptions of North Atlantic Treaty Organisation (NATO) and Warsaw Pact forces as implacable adversaries, seen through an ideological prism, are a thing of the past. As profound changes have occurred between two former adversaries, there is hope that multilateral institutions like the UN would be revitalised to assume the mantle of collective security. New regional organisations, such as the Organisation for Security and Cooperation in Europe (OSCE) and the ASEAN Regional Forum (ARF) have emerged. Existing

Text of the Inaugural Address delivered by Shri I.K. Gujral, Hon'ble Minister for External Affairs during the Joint USI-RUSI Seminar held at New Delhi on January 23, 1997.

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a study of the Command Organization which is the grouping of people that plan and execute operations at the strategic levels of warfare both during war and Cold War. The study of command organization provides insight into how NATO strategies were formulated, coordinated and executed primarily against the Soviet submarine fleet of 29 submarines in 1950s. Some readers may find it a dry study of a wet subject.

— Lt Col. Daljit Singh

Inside the Blue Berets, A Combat History of Soviet and Russian Airborne Forces 1930-1995 : By Steven J Zaloga, *Novato, Presidio 1995, p. 339, $ 24.95, ISBN 0-89141-399-5.*

The book pertains to the combat history of Soviet and Russian Airborne and Special Forces covering the period from 1930 to 1995. Soviet airborne operations have been cloaked in secrecy for many years and only recently have many of their missions been publicly disclosed. The book surveys the evolution of Russian Special Forces and offers the first hand description of the murky situation that surrounded the breakup of the USSR.

If the West ignored the Russian airborne operation, the Soviet Army certainly did not. In the Cold War years, the Soviet Army's airborne forces became the largest in the world. Well trained, motivated and well equipped, they were the shock troops for an invasion of capitalist Western Europe, an invasion that never came. Instead the VDR Airborne Force became the imperial storm troopers of the Kremlin, despatched to the dirty little imperial skirmishes of the Cold War, Hungary in 1956, Czechoslovakia in 1968 and Afghanistan in 1979. For ten long yeas, the Blue Berets of the Soviet airborne forces bore the brunt of the hard fighting in the brutal mountains of the Hindu Kush in Afghanistan.

The Russian Army may no longer be the threat but the Blue Berets are likely to figure prominently in the headlines over the next decade. In the New World Disorder, rapidly deployable special forces are becoming the central focus of modern armies, where the Blue Berets will provide Russia with the power projection muscle in these conflicts.

— Col RPS Malhan, YSM, SM

Aircraft of the Royal Air Force Since 1918 : By Owen Thetford, *London, Putnam, 1995, p.414, £ 35.00, ISBN 0-85177-865-8.*

This is the ninth edition of the book originally published in 1957, a part of the series by Putnam.

As the title suggests the book has the complete listing of aircraft that have served the Royal Air Force since the end of the first World War. Starting with the aircraft that survived the great war like Bristol Fighter to the very latest, the

since the retention of nuclear weapons by any state is bound to be an incentive for others to acquire them.

The idea of NWFW was put back on the world agenda by Gorbachov in 1986. President Reagan also had a vision of a world without nuclear weapons. The disintegration of the USSR has removed the main purpose of nuclear weapons. The threat to world security now comes from nuclear proliferation. The way of stopping this is to have an enforceable world ban.

This book is divided into five parts : Part A - Historical, Part - B Desirability of NWFW; Part C - Feasibility of NWFW, Part D - Alternative Route to NWFW and Part E - Intermediate Steps. The contributors - many of whom are experts with long experience in the field of nuclear weapons - seek to answer two key questions regarding the concept of NWFW : Is it desirable : Is it feasible? The purpose has been to focus on various issues involved and this must be studied for acquiring greater knowledge on the subject.

— Maj Gen Prem K. Khanna, MVC (Retd)

DESERT WARRIOR : A Personal View of the Gulf War by the Joint Forces Commander : By HRH General Khaled Bin Sultan, *London, Harper Collins Publishers, 1995, p.492, £ 20.00, ISBN 0-00-255612-X.*

'Desert Warrior' is the memoirs of the Gulf War by General Khaled Bin Sultan a scion of the Saudi Royal family. General Khaled 'was the parallel commander' of 14 Arab/Islamic Forces in the 37-nation coalition fighting against Iraq, under US General Norman Schwarzkopf. Saudi Arabia was the linch-pin of the coalition and without Saudi Arabia, USA and her Allies would have destroyed but NOT defeated Iraq. Although Khaled analyses the Gulf War from various angles like tactics in the Desert of destroying the desalination plant at al-Khafji in the face of any advance of the Iraqi forces, it is clear that General Khaled was more involved in maintaining the Arab culture and identity insulated against the Western influences, so that the 'all-powerful Americans do not swallow us up'. American Service women were required to don black robes over their uniforms and were not permitted to drive off-duty. When Bob Hope was to visit the US troops along with Brooke Shields, Saudi Arabia refused the entry of Brooke Shields!

— Lt. Colonel Daljit Singh

Securing Command Of The Sea : NATO Naval Planning, 1948-1954 : By Sean M. Maloney, *Maryland, Naval Institute Press, 1995, p.276, ISBN 1-55750-562-4.*

This book covers the NATO naval planning during the period 1948-1954 for the command of the sea. The domination of the sea is exercised not only through the number of ships but through command organizations. This book is

organisations like North Atlantic Treaty Organisation (NATO) also are seeking to redefine their role in trying to tackle existing and future challenges. This, we hope, is reflective of a new and cooperative spirit.

It is natural that India's immediate neighbourhood should be a major priority in India's security considerations. A peaceful and constructive environment in our neighbourhood is vital for all of us, if we are to achieve accelerated development for ourselves and for the region as a whole. The South Asian region accounts for roughly one-fourth of all humanity. If this region is to establish its rightful place in the community of nations, cooperation and mutual goodwill have to be firmly established as the basis of intra-South Asian relations. Given India's size and situation, it is natural for us to take the initiative in building up confidence and establishing cooperation in all facets of our relationships.

The security of a home lies not in the bricks and mortar used in its construction but, in the ultimate analysis, depends upon the goodwill and amity of its inhabitants. India's foreign policy, specially in the neighbourhood context, reflects this simple reality.

The "Gujral doctrine", as it has come to be termed, is based on five simple principles. Firstly, with its neighbours like Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka, India does not ask for reciprocity, but gives and accommodates what it can in good faith and trust. Second, we believe that no South Asian country should allow its territory to be used against the interests of another country of the region. Third, that none should interfere in the internal affairs of another. Fourth, all South Asian countries must respect each other's territorial integrity and sovereignty. And finally, they should settle all their disputes through peaceful bilateral negotiations. These few simple ideas, if implemented, will result in a positive impact on the security situation in our region and a fundamental recasting of South Asia's regional relationships and our role in the world.

India has already established that it is ready to go the extra mile to inspire confidence and generate momentum towards a new partnership in South Asia and it is apparent that we have already achieved substantial success with this approach.

We have recently discussed and implemented new and significant initiatives with Nepal, Bhutan and Bangladesh which are steering our relations to higher levels of cooperation. The Treaty on sharing of Ganga waters has established a landmark in our relations with Bangladesh, and opened up new vistas of constructive collaboration in all areas of our interaction. It is a matter

of pride that this Treaty has been welcomed, not only in India and Bangladesh, but the world over, and is a clear demonstration of what can be achieved with sincerity and a sense of purpose. In time, we expect that the entire eastern region of the sub-continent, including Nepal, Bhutan, Bangladesh and India would see a surge of development through cooperation in the areas of transport, energy development, water management, etc.

Likewise, with Sri Lanka, from where I have just returned, we have expressed our desire to assist, without being intrusive, in an early settlement of the conflict in that country. Such an outcome would have beneficial results for India and the entire region. We would like the Palk Straits to become a gateway for peaceful commerce and communication among our people. We should dream of once again making the maritime frontier, which India and Sri Lanka share, an area of peace, and then take up collaborative ventures for advanced research and exploitation of ocean resources. Situated as we both are at the centre of the Indian Ocean, our maritime interests are close and intertwined. Together with the Maldives, our partner in the South Asia Association for Regional Co-operation (SAARC), we can explore possibilities to turn this region into a prosperous growth area. Our friendship will also provide an anchor for the security and prosperity of the Indian Ocean region.

With regard to Pakistan, you would be aware of the offer of a dialogue we made to Pakistan soon after our Government took office. Even while we are awaiting Pakistan's response, we are taking unilateral steps to improve the relationship at the people-to-people level. We are also trying to preserve a positive atmosphere, by avoiding polemic, and ignoring the occasional hostile rhetoric from across the border.

Beyond the immediate South Asian-SAARC neighbourhood, lies what I call an extended, even proximate, neighbourhood, which is of great significance to India. Central Asia, for example, is one such area. This region straddles some of the world's richest known deposits of hydrocarbon resources. We have responded to the need to build enduring partnerships with the countries of this region by setting up missions in all these countries to promote political, economic and technical cooperation. The inadequacy of direct surface access to this region is, of course, a problem, but we are addressing this through a trilateral understanding with Iran and Turkmenistan.

Developments on the security front in Central Asia, too, are a concern for us. We are watching the developments in Afghanistan, and our earnest desire is for an end to external interference in that country, followed by a return to peace.

world. Their role has been either neglected or taken for granted except when there is a crisis situation. However, with their substantial nuclear capability they are in a position to shape the result of any future global nuclear decision. By abandoning nuclearism, these three powers could have tremendous political leverage on Russia and the United States and also other undeclared nuclear powers. On the other hand, a choice of status quo would mean continuing with balance of terror, making possible quick and large scale destruction.

Bruce Larkin whose earlier work pertains to the Soviet (former) factors in America's Central American policy, takes up possible role of medium level nuclear powers in nuclear disarmament. And with some contentious formulations indeed. He believes the US and Russia are likely to prove to be the most tenacious adherents to nuclearism, in spite of the fact that they have voluntarily agreed to reduce strategic nuclear weapons in the last six years. On the contrary, the amount of intransigence shown by the second-tier nuclear powers, especially China and France, regarding their own arsenal, nuclear explosions, as well as arms trade have led to many apprehensions.

However, special emphasis on transparence, mutual reassurance and collective measures against non-compliance, as well as other political and social means to guarantee against weapons of mass destruction will have a strong bearing on all aspects of nation building. The book also throws substantial light on defence expenditure, implications of environmental degradation due to weapons explosions, etc. A useful work with good amount of information on medium nuclear powers.

— Kishore Kumar

A Nuclear-Weapons-Free World : Desirable? Feasible? : Ed. by Joseph Rotblat and others, *Boulder, Westview Press, 1993, p.228, $ 19.95, ISBN 0-8133-3013-0.*

The destruction and havoc caused by the atomic bombs dropped on Hiroshima and Nagasaki made the world's statesmen realise the danger to the world security from the thousand fold increase in the lethal power of a single weapon. So, in the aftermath of Hiroshima and Nagasaki a widespread belief emerged that a world with nuclear weapons would be very dangerous.

The elimination of nuclear weapons has been the declared objective of the United Nations from the very beginning of its existence, affirmed in many declarations and resolutions signed by member states including nuclear weapon states. During the period of Cold War, these desires were disregarded.

It has been widely accepted that nuclear warheads have no utility as weapons of war as "a nuclear war cannot be won and must never be fought". The only possible function of nuclear weapons is to deter their use by another state. It is desirable, therefore, to have a Nuclear-Weapon-Free-World (NWFW)

Though at times the book makes heavy reading and is repetitive, it is very informative. The essays are by very knowledgeable authors.

A useful book for most libraries.

— Brig YP Dev (Retd)

The Last Great Nuclear Debate : NATO and Short Range Nulcear Weapons in the 1980's : By Thomas E. Halverson, *London, Macmillan, 1995, p. 219, £ 40.00, ISBN 0-333-62538-2.*

The book pertains to decision making processes of NATO nuclear weapons mix, in the context of Flexible Response and Escalation Strategies. A fundamental change particularly in the attitude of Federal Republic of Germany started to emerge after the appearance of Gorbachev on the scene. Prior to this there was a 'Responsibility Bargain' where the United States as NATO nuclear supplier took primary responsibility for nuclear decisions and by accepting deployment of nuclear forces on their soil, European allies received sought after nuclear guarantees in the face of the Soviet threat. As a part of this policy a programme had been formulated to have a Follow-on-to (FOTL) as a more tactically advanced short range ballistic missile as also improved Artillery Fired Atomic Projectiles (AFAP) in the 1990s.

The entire stability in nuclear realm got disturbed when Gorbachev proposed zero option on Intermediate Nuclear Forces (INF) in Europe and the Treaty was arrived at. The European concerns, particularly of Federal Republic of Germany got heightened because the INF Treaty led to a preceptioin of strategy where nuclear strikes would be limited in geographic depth to limit escalation. This implied that while Europe would be the war zone, the absence of Intermediate Nuclear Forces on which there was multilateral control, may prompt US not to use its long range nuclear strategic forces to avoid retaliatory action on its soil. Thus the Europeans felt that they were being made pawns in the 'Game'.

In the Last Great Nuclear Debate it is discussed as to how from 1987 to 1989 the Germans were able to achieve their nuclear preferences over traditional decision making concepts on nuclear weapons mix in Europe and how the FOTL and AFAPs were cancelled.

The book should particularly be read by the pseudo nuclear specialists in India to understand the complexities that go with nuclear power and how dangerous a proposition of two or four nuclear bomb nations can be in the absence of a doctrine.

— Air Marshal KD Chadha

Nuclear Designs : Great Britain, France and China in the Global Governance of Nuclear Arms : By Bruce D. Larkin, *New Brunswick, Transaction Publishers, 1996, p. 354, $ 34.95, ISBN 1-56000-239-5.*

The second tier nuclear states, according to the author, have special obligation to consider and help enforce non-nuclear option in the post-Cold War

Many of you would also be aware of the expanding relations between India and the Association of South East Asian Nations (ASEAN) countries. Our sectoral dialogue partnership was upgraded last year to Full Dialogue Partner status.

India also became a member of the ASEAN Regional Forum (ARF) on this occasion. The ARF is a post-Cold War institution where countries with different political and economic structures, varying size and military strengths, are present. This group does not reflect a military alliance but is motivated by the idea that despite the diversity, measures should be pursued collectively which will enhance the security of each one of its members, and the region as a whole. I myself had the pleasure of sensing the growing climate of collaboration and trust when I visited Jakarta in July 96 for the Post-Ministerial Conference. I was happy to see that there was a recognition of India as a key factor of stability and economic dynamism in the Asian region.

By virtue of its geographical position, India has a natural interest in maintaining the Indian Ocean as a region free from military rivalries. The Indian Ocean Rim Initiative with which we have been associated since its inception, aims at bringing together countries with a shared objective. The first meeting of the Indian Ocean Rim Association for Regional Cooperation is slated to take place in Mauritius in March this year and we hope to discuss all issues of mutual concern, especially the potential for greater economic and commercial cooperation. At present, diversity makes it difficult to consider tackling military threats to security. However, a beginning has been made by instituting dialogue and consultation, and this will give greater content to relations among the Indian Ocean Rim countries.

In this period of significant change, where we are trying to transform the politico-economic face of our region, the concept of security has to be viewed afresh. Security can no longer be visualised in narrow military terms. Today, it calls for inter-dependence among all countries in the world, to tackle non-conventional and non-military threats arising out of international terrorism, narcotics, ethnic conflicts, fundamentalism, environmental pollution, natural disasters, etc., all of which impinge upon the overall security of nations. A redefinition of old concepts requires new thinking and fresh approaches, if we are to successfully deal with the challenges posed by an uncertain future. More so, there is a growing realisation that what is needed is a collective approach, based upon cooperation rather than competition and confrontation.

Nowhere is this more valid than in the area of nuclear disarmament. We are told that the US and the Russian Federation no longer target their missiles at each other. Yet, there is a reluctance to accept the notion that elimination

of nuclear weapons is the only practical and lasting way to deal with the scourge of nuclear proliferation, as well as to enhance global security. The acceptance of the philosophy of interdependence and collective security has been successful in dealing with biological and chemical weapons, and we see no reason why it cannot be used to rid the world of the nuclear shadow.

Last year, the CTBT was concluded after two and a half years of intensive negotiations. It is a source of great disappointment to us that India, which had made the first call for ending nuclear testing in 1954, was unable to subscribe to the Treaty because of its fundamental shortcomings. The CTBT, as it has emerged, is no longer linked to the process of nuclear disarmament. Further, it only prohibits nuclear explosion testing and therefore, cannot be described as a comprehensive treaty that would ban all kinds of nuclear testing whether based on explosions or other techniques.

We are not simplistic enough to call for nuclear disarmament to be achieved overnight. Yet, we are also realistic enough to believe that the end of the Cold War offers us a unique opportunity to demonstrate our commitment to the goal of a nuclear weapon-free world. This commitment should be translated by commencing negotiations on a Nuclear Weapons Convention that would prohibit the development, deployment, production, stockpiling and transfer of nuclear weapons as also provide for their elimination within an agreed timeframe. It is heartening to note that there is a growing interest in discussing these issues, particularly, the technical aspects relating to verification. These deliberations, presently being undertaken by Non Governmental Organisations, are welcome.

Confidence Building Measures (CBMs) are another important aspect of international security and need to be strengthened in order to reduce mistrust and allay apprehensions. These measures can take different forms. To begin with, political declarations are important but in the long run, these are not enough. Means of communication and dialogue have to be established in order to substantiate the political declarations. This implies a degree of transparency. Participation in global efforts like the UN Arms Register and regional initiatives about military information sharing, cooperation in region specific issues such as maritime security are potential areas for consideration. Once the channels of communication are established and confidence has been built up, discussions on regional defence issues become feasible.

The processes that I have identified are not new. We have seen that Confidence Building Measures have been introduced and practised in Europe during the last two decades. However, there is one fundamental difference. In the post-Cold War world, these confidence-building-measures have to be

the editors is to re-kindle quest for history which perhaps today is getting swamped by electronic media and where visual images and audio sources are being preferred to the written word.

In the section on Debates the discussion is mainly on Europe, the decline of colonial empires, welfarism, gender issues, as also on approaches to history. Hegel and Fukuyama are commented upon extensively and there is a cynical comment that perhaps ignorance is today a pre-requisite to the writing of universal history.

In the section on International Perspectives the comments of interest are those on Russia, China and India. The main poser on Russia is whether it can create democratic minds and institutions to manage conflict. In relation to China the primary question is, not that it is all set to become the world's biggest economy, will it be able to dismantle central control of the state? On India the suggestion is that despite massive social and economic change, in contemporary terms, India remains unresearched .Journalism in India is more a career rather than a profession and the significance of real events thus remains muted.

On sources the book suggests how researchers can reach and sift information. Altogether an extremely useful volume for those having a bent towards history and wanting a frame or reference on what constitutes contemporary history.

— Air Marshal KD Chadha

France : From the Cold War to the New World Order. Ed. by Tony Chafer and Brian Jenkins, *London, Macmillan 1996, p. 245, £ 40.00, ISBN 0-333-63666-X.*

The book is a study on France after the Cold War and her relations with the rest of Europe after the unification of Germany. It is divided into five distinct sections containing essays on Foreign Relations, Defence and Security, Economy, Politics and relations with the 'Magreb' written by a number of experts in each field.

The French feel that France must help to build Western Europe into an organised union of states which will have decision making independent of the US. An entity which in political, economic and military terms will be the most powerful, prosperous and influential the world has ever known. The book focuses on shortcomings of equipment including Mirage 2000 and AMX 30 (heavy) and the nominal manpower they could muster for the Gulf War. It was an eye opener that large parties of the French Army are conscript and every time require a special vote in the national assembly to recruit them.

Some of the essays cover the French economy; its trade with China and Vietnam and other aspects pertaining to attitude on CTBT, NPT and PTBT, 'Magreb', relations with specially Algeria, Iraq and Iran which appear to be its main concern.

recommendations of 1886. Interestingly, the Anglo Indian Community became a reckonable voice in these controversies. In the field of social reforms the passage of the Age of Consent Act in March 1891, raised all-India reaction from reformist social leaders and conservatives. By this Act, consumation of marriage with a girl under 15 years of age was dubbed as a criminal offence. The Bengali elite was voluble in these controversies.

Mrinalini Sinha's thesis has placed "colonial masculinity" as the key factor of social conflict in Bengal of the 1880s, and makes material contribution to social history.

— Maj Gen SK Talwar

Pakistan At The Cross-Roads : By Mushtaq Ahmad, *Pakistan, Royal Book Co. 1993, p. 266, Rs.300.00, ISBN 969-407-154-2.*

This book was first published in 1985, and the second edition in 1993. The book is based largely on the weekly column, contributed to DAWN. It is an authentic version of the Zia regime, covering first eight of the eleven years of his government.

Zia's government was one of crisis, dealing with one crisis after another. In Pakistan, successor governments have been critical of their predecessors. The new rulers have been quick, to dust off the old slate and replaced them by their own formula. Ghulam Mohammed's assault on the constitution was one instance and Ayub Khan's controlled democracy another. Though the source of power of Zia-Ul-Haq was also the Army, religion was the chief weapon in his armoury.

The volume gives a comprehensive analysis of the martial law regime and deals with the diversity of political ideas, economic policies, social objectives and exploitation of religion by the head of state. It attempts to understand the developments, which brought the country at crossroads, during that period of history of Pakistan.

The author, after his Masters from Bombay University, had a distinguished academic career, besides research and writing, over four decades. He is the author of more than a dozen books.

It is a good introduction to Pakistan of the eighties.

— Maj Gen Ram Nath (SM)

The Contemporary History Hand Book : By Brian Brivati and others, *Manchester University Press, 1996, p.488, £ 17.99, ISBN 0-7190-4836-2.*

The Contemporary History Handbook is in three sections which cover Debates, International Perspective and Sources. Each of the sections has views expressed by scholars on subjects affecting contemporary history. The aim of

negotiated not among two alliances but among sovereign nations in a cooperative spirit. Every country will bring its own legitimate concerns to the negotiating table which will need to be addressed adequately. Unlike during the Cold War when such measures were seen in a bi-polar context, today, confidence building has to be seen as an exercise in creating a pluralistic security order.

You would no doubt be aware that India has done a lot of work on instituting CBMs with both Pakistan and China. In fact, this was carried significantly forward in the case of China when their President visited us recently. I am sure that we can all do more and build on the current achievements.

Such developments at a regional level do not diminish the emphasis on globalism which has been a cornerstone of India's foreign policy. It serves to complement the global approach in a manner that has become feasible, with the end of the Cold War. Security concerns or threats have not disappeared. But today, we have more instruments and institutions available to us in order to deal with these concerns in a manner, consistent with the traditional principles of Indian foreign policy. Perhaps, it is easier for India to engage in such a dialogue with its various interlocutors compared to some other countries which have been members of military alliances during the Cold War. For them, a post-Cold War period requires major shifts in thinking. For us, it reflects a new opportunity and continuity.

I am confident that the dialogue which will take place in the next two days between USI and the Royal United Services Institute of UK will contribute to greater understanding and further our efforts in creating a pluralistic security order. May I take this occasion to again warmly congratulate the USI which has had such a distinguished record. I look forward to your deliberations and wish you success in your endeavours.

The Impact of Decreased Defence Spending on the Indian Armed Forces

AIR CHIEF MARSHAL (RETD) O.P. MEHRA, PVSM

Mr. Chairman, erstwhile colleagues, eminent participants and friends,

I deem it an honour to be called upon to deliver the Valedictory Address. At the outset it gives me immense pleasure to congratulate the USI Council for their initiative in hosting this Seminar on a subject of consequence not only to those who are currently part of the Defence apparatus and those of us who have had the distinction of being partners in matters relating to National Security, more importantly the deliberations of this Seminar should be of interest to National Security policy framers-the political leadership and the discerning intelligentsia of the country.

Having read and heard the contents of the various papers presented and the discussions held, I have no hesitation in stating that the proceedings reflected deep study of the subject. For those who are responsible for handling expenditure on defence, there is a wealth of wisdom in the utterances. I sincerely hope that the sound views expressed during deliberations of the Seminar would not be deemed as unwarranted criticism of the powers that be, but the genuine concerns of those who hold National Security as a sacred trust. There is no denying the fact that if the views expressed by various Speakers are accepted as food for thought, if not in the immediate, but in the long run, the Armed Forces would be assured of a cost affordable infrastructure commensurate with the tasks they are expected to perform i.e. ensure security of the realm and its territorial integrity.

During the first fifteen years of Indian Independence, the country spent an average of 1.6 percent of its GDP on defence. Parliamentary debates during that period suggest that our policy makers deemed even this figure as too high and it was felt that it was retarding socio-economic growth - a totally unwarranted posture as global experience shows the reverse to be true. It was opined that since India wanted to live in peace, no one would distrub its peace. The 1962 Chinese invasion proved how wrong our policy was and national honour had been compromised by not providing adequate resources. National Security

Text of the Valedictory Address delivered by Air Chief Marshal O.P. Mehra, PVSM, former Chief of the Air Staff and former Governor of Maharashtra and Rajasthan during the USI National Security Seminar held at New Delhi on November 29, 1996.

The study feels that Indian security and stability will be determined by its economic management. On Pakistan much of the description is outdated as recent developments have changed the situation dramatically.

The book has a great deal of information but in certain section it is more descriptive than analytical.

— Air Marshal K.D. Chadha

Asian Security Handbook : An Assessment of Political - Security Issues in the Asia-Pacific Region : Ed. by WM Carpenter, David Wiencek, *New York, ME Sharpe, 1996, p.301, $ 27.95, ISBN 1-56324-814-X.*

Western interests in the Asia Pacific region have dramatically expanded over the last few years. While economic development is predicted to continue in the region, the assumption of political stability on which it depends is clouded by major security uncertainties lurking in the background, which could undermine the relative stability of the region. This book takes on wide ranging review and analysis of regional issues and the task of explaining and analysing the formidable and complex array of forces engaged in Asia.

The end of Cold War has not fundamentally altered many of the region's geopolitical realities. True, the large scale Soviet threat has disappeared, and with it the rationale for much of the region's traditional security and defence preparedness, thereby creating new dilemmas for defence planners. Long time tensions do exist between the two Koreas, China and Taiwan, India and Pakistan and the possibility of a military clash over the contested Spratly Islands. The book examines many uncertainties and unresolved issues, which will determine the future power balance based on the role of China and the United States in the region. This in turn will have a dramatic influence on how other nations in the region develop their security strategies and configure their military forces. The book makes important contribution that should be read alike by policy makers, analysts and students.

— Col RPS Malhan, YSM, SM

Colonial Masculinity : The 'Manly Englishmen' And the 'Effeminate Bengali' In the Late Nineteenth Century : By Mrinalini Sinha, *Manchester, Manchester University Press, 1995, p.191, £ 14.99, ISBN 0-7190-4653-X.*

The author has critically examined and projected the colonial strategies administrative, economic and social, resulting in controversy about the upper class society in India, particularly in Bengal. The colonial cliche of the effeminate Bengali Babu was a consequence of this "colonial masculinity", during the last decades of 19th Century.

Her study discusses the course of social revolution through the Ilbert Bill - 1883 which accorded jurisdiction to native officials over Europeans in moffusil areas, the Native Volunteer Movement 1885, whereby the Indians sought to organise themselves as a body and the Public Service Commission

been essentially internal rebellions seeking amelioration of certain grievances or local autonomy. These have been aided by some foreign countries and have been contained by counter-insurgency measures. The security forces have been able to instil confidence amongst the local population and protect them from the insurgents. This book looks at problems of ethnicity, governance and development in the Northeast. The people of Northeast want peace and an end to mindless violence that can achieve nothing but hinder development. The author has carried out a comprehensive research and produced various facets of the Northeast region. A very good and well documented book for all students of history.

— Maj Gen. Prem K. Khanna, MVC (Retd)

Crisis Prevention, Confidence Building, and Reconciliation In South Asia : Ed by Michael Krepon & Amit Sevak. *New Delhi, Manohar, 1996. p. 276, Rs. 425.00, ISBN 81-7304-144-X.*

The fifty years old animosity between India and Pakistan, continues unabated, causing much suffering to the people and retarding economic progress. This volume is most timely and first of its kind. The authors who have made contributions are from India, Pakistan, China and USA. They have made concrete proposals, to help avert future conflicts and to encourage regional cooperation. They have also listed out CAMS and CBMS that could be undertaken, to help in our goal, of eliminating the 'Cold War' between India Pakistan. Both the editors, are experts in international affairs. Foreign policy makers and diplomats will find this book educative and thought provoking.

— Maj Gen Ram Nath (SM)

Asian Security 1995-96 : By Research Institute for Peace and Security, *London, Brassey 1995, p. 261, £ 25.00, ISBN 1–85753-113–2.*

The comments in the study by the Tokyo Institute, cover practically all major countries of Asia but in some cases views have been taken by new events. The basic thrust of the book is, on whether the type of cooperation obtaining in Europe can be replicated in Asia. The general view expressed is that preference in Asia is for loose agreements that afford flexibility.

The primary security concern according to the Institute is the US withdrawal from the East Asian Region and the Chinese long term intentions particularly their aspirations in the South China Sea.

The chapter on China's perception on security is a refreshing departure from the stereotypes. The suggestion is that China will need West's assistance for its military modernisation for a long time and ultimately it is the impact of US, Russian and Japanese policies that collectively may determine the future course. The overall view expressed is that China could be a major security concern of all East Asian nations and this could lead to an arms race.

policy makers stood totally condemned and unfortunately so did the military leaders.

The Sino-Indian War marked a watershed in relation to defence expenditure. Defence expenditure experienced a massive spurt to register 3.8 percent of the GDP. It, however, fell to settle at around 3 percent of the GDP during the next quarter century.

India's GDP Growth and Resource Allocation for Defence

Since 1955 GDP growth and resource allocation for defence were as under.

Year	Average Growth Rate of GDP	Defence Expenditure	
	Percentage	Percentage of GDP	Percentage of Central Govt. Expenditure
1955-1959	3.49	2.03	23.50
1960-1964	5.37	2.64	25.40
1965-1969	2.97	2.96	22.55
1970-1974	2.52	2.98	21.51
1975-1979	3.86	3.03	19.05
1980-1984	6.10	2.98	17.39
1985-1989	6.11	3.35	16.02
1990-1994	4.82	2.63	14.61
1995-1996	6.80	2.35	14.13

[Sources: Economic Survey, Govt. of India, for different years, and Asian Strategic Review 1995-96, IDSA, New Delhi, 1995.]

It is pertinent to note that progressively the defence expenditure as a proportion of the Central Government expenditure has been scaled down from around 24 percent in 1955-59 to 14.13 percent during 1995-96.

Without detracting from the views expressed by various Speakers, I take it that the impact of decreased defene spending on Indian Armed Forces is and will amount to an unbalanced force structure, an ill-equipped, ill-trained and unprepared defence establishment for reasons which we ought to go into, to establish why we are again in such a sorry state of affairs.

No organisation much less the Armed Forces can function effectively and efficiently in the absence of well thought out long term plans and strategy. Unfortunately, as matters stand at Governmental level, we do not have an institutionalised structure which can evolve an integrated defence policy. This

has not been possible because National Security is erroneously deemed to be the preserve of the Ministry of Defence. The absence of an Organisation at the Apex level to undertake integrated thinking is to say the least criminal. Similarly we do not have a set up charged with the responsibility of drawing up an overall strategy evolved on broad-based deliberations after collecting, collating and digesting information covering various aspects of national existence, e.g. political (national, regional, global), economic, industrial, science and technology, socio-political, socio-geographic, socio-economic factors and more importantly involving the defence services. Unless we have agreed strategic goals, as also co-ordinated security policies backed by national consensus, we cannot but continue to drift and be victims of adhocism as is clearly evident today.

Looking at the problem in the historical perspective, the Defence Organisation which we inherited at the time of Independence in 1947 was an extension of the one that obtained during the British regime. The Whitehall functions were passed on to the Defence Ministry which was to be under a Political Executive. With the emergence of the three Services with independent identities, each Service was headed by a Commander-in-Chief. All the Cs-in-C were to perform operational planning and administrative functions in relation to their respective Service. The Chiefs of Staff Committee was expected to carry out co-ordination and integration functions. A string of Committees was instituted to provide geo-political, geo-strategic, industrial and economic inputs for structuring military capability and operational plans.

It would not be incorrect to state that the main purpose for selecting such a higher defence set-up was to affirm civilian control over the military and to ensure interservice co-ordination. As prior to Independence, no Indian had been associated with formulation of defence policies, the inheritance of the above mentioned set-up was inevitable. It must also not be forgotten that at that time all the Service Chiefs happened to be officers of the British Armed Forces. It is unfortunate that with the passage of time such Institutions as the Defence Committee of the Cabinet (DCC) and Defence Minister's Committee(DMC) which were expected to appreciate estimates of threat and the quantum of resources needed to provide the wherewithal to the Defence functioning which did exist till 1960 or so, became a casualty. The basic problem has been, and still is, that political incumbent of the Ministry of Defence have little or no experience on military matters and have relied on the advice of the chief bureaucrats in the Ministry of Defence. Without meaning disrespect, I have no hesitation in stating that these people - the civilian bureaucrats - were equally ill-equipped in matters relating to national security and the management of the defence set-up. Since Mr. J.N. Dixit has voiced eloquently on this aspect in support of my contention I quote the views ex-

The International Dimensions of Internal Conflict : Ed. by Michael E. Brown, *Mass., The MIT Press, 1996, p. 654, $ 25.60.*

Michael E. Brown, Associate Director of the International Security Programme at the Centre for Science and International Affairs (CSIA) at Harvard University has dealt with the most important agenda of international relations i.e, 'Internal Conflict'. Intrastate conflicts have practically engulfed all the regions of the world and pose a serious threat to international peace and security. The resultant fallout has displaced millions of people besides mass scale killings. In the available literature on internal conflicts researchers have not come out with widely accepted answers to the problem. The volume makes a systematic attempt to identify the missing gaps in the research carried out on internal conflict. The causes and consequences of internal conflict on the neighbouring states including the refugee issue and economic repercussions have been focused in a scholarly manner. Michael E. Brown has done a wonderful job with his fourteen contributors in the book under review to highlight the issues facing the former Yugoslavia and the Balkans, East Central Europe, Russia and former Soviet Union, South and Southwest Asia, the Middle East, North Africa, Central America and South America. Besides this, the role of negotiation and mediation by the non governmental organizations, the United Nations, collective security organization and the effectiveness of economic sanctions have been very well highlighted in the book.

The book has been divided into three parts with maps and tables which make the understanding of the complex issue of internal conflict easy for the reader. A well researched and well timed addition to the existing literature on the subject. It is highly recommended for policy makers, peace keepers and research scholars.

— Major Sunil Chandra, Ph.D

India's Northeast Resurgent : Ethnicity, Insurgency, Governance, Development, By B.G. Verghese, *Delhi, Konark Publishers, 1996, p. 475, Rs. 450, ISBN 81-220-0455-5.*

India's Northeast, originally a bridge to lands further east, the region was rendered all but land locked by Partition which dealt it a cruel blow from which it is yet to recover fully. The completion of infrastructure will open up this resource-rich region to a new and significant phase of development which is likely to present attractive alternative to agitation and insurgency.

The book deals with the seven states of Northeast proper viz Assam, Meghalaya, Arunachal, Nagaland, Manipur and Tripura as well as Sikkim and the Darjeeling - Gorkha Hill area, making nine units in all. Sikkim has already been admitted to the North Eastern Council and North Bengal, beyond the Siliguri corridor, is integrally linked to the Greater Northeast.

Insurgency came with the Naga assertion of not being part of India. The Mizos made a separatist demand but did not press it. Other insurgencies have

established himself as a good soldier and a military writer who won the United Service Institution of India's gold medal and also received many prizes for his military writings.

In his autobiography, Brigadier Nazareth describes his early education under trying conditions both at the school and college. He supplemented his college educational expenses by taking odd tutions.

Nazareth did the young Combat Officers' nine months course at the officer training school Mhow where he excelled himself both in sports and at various drills. As a Captain (junior most officer) Nazareth underwent the staff course, at DSSC, Welingdon where he developed his writings and contributed extensively to the college magazine - the "Owl". In 1963, he joined the staff college as a directing staff. The writer of this review underwent the staff course at the same time and was impressed by his knowledge of military matters as well as international and domestic affairs.

An excellent book which should be read by all young officers to inculcate the qualities of good leadership. A good addition to all libraries.

— Commodore R.P. Khanna AVSM
Indian Navy (Retd)

KASHMIR : A Tale of Shame, By Hari Jaisingh, *New Delhi, UBS Publishers' Distributors Ltd., 1996, p. 235, Rs. 250.00, ISBN 81-7476-095-4.*

On Kashmir, abundance of literature is available. Even then books on Kashmir continue to flood the market, due to the importance of the subject and the changing dynamic scenario.

This volume by Hari Jaisingh makes a valuable contribution. The chapters on the history, from Vedic age to 1947, are very informative. Subsequently the events too are well covered. But the author appears to be rather harsh in his judgement on some of the personalities involved .Moreover, some of us may not, subscribe to his views fully. He is very critical of Mountbatten's role and accuses him, of wanting Kashmir to merge with Pakistan and promote western strategic interests. He is critical of Nehru for accepting plebescite, stopping the march of our Army, when they were poised to free J&K of raiders, completely and also for taking the problem to the UNO. on advice of Mountbatten. He is also critical of Sheikh Abdullah for his "shady" behaviour. He is critical of successive governments in New Delhi for playing games. He is not happy with Indira Gandhi, Rajiv Gandhi, V.P. Singh and Chandra Shekhar for various omissions and commissions. He also has uncharitable comments to make, on the conduct of Kashmiri Pandits. The Author holds strong views, backed by facts. He appears to be angry with the way events have unfolded, during the last fifty years in Kashmir.

The book is well researched, written in easy and lucid style. It will be a useful addition to any library.

— Maj Gen Ram Nath (SM) (Retd)

pressed by late Shri H.M. Patel - one of the very senior and eminent civil servants who served a term as Defence Secretary.

"The ignorance of the Civil Servants in India about military matters is so complete that ....we may accept it as a self-evident and incontrovertible fact."

With the passage of time the situation has not changed to any appreciable degree.

It is pertinent to record that despite such a damaging assessment of the civilian bureaucrats capacity to handle National Security, little or no attempt has been made to either prepare the bureaucracy or the political leadership to shoulder the onerous task that they are expected to perform in relation to National Security.

On the contrary with the passage of time, the Defence Secretary instead of being co-ordinator in regard to some of the functions relating to the Defence Services has become an arbiter on matters beyond his comprehension. Unfortunately, the so called civilian political control has progressively degenerated into civilian bureaucratic control and this illegitimacy is naturally prejudicial to the functioning of the Services. Some Civil Servants argue that the Chiefs of Staff have the right of direct access to the Defence Minister and even the Prime Minister and hence the contention that the civilian control tantamounts to bureaucratic control, is unfair.

It is true that the Chiefs of Staff have a right of direct access to the Defence Minister and even the Prime Minister. Such right can at best serve as medicine but not as food or sustainer. It would be unwise on the part of the Chiefs of Staff to use this right of approach to get even with the civilian advisers of the Prime Minister and the Defence Minister. The Chief of Staff should rightly speaking be foremost amongst advisers on National Security and, in fact, an integral component of the organisation.

In 1967, the Administrative Reforms Commission categorically stated; 'the subordination of the Military to the Civil should be interpreted in political and not in the bureaucratic sense'. Despite this, in practice, the working as it obtains today is far from satisfactory. The Commission was at pains to record that the system in vogue contributes "little except delays".

I remember a knowledgeable Defence Minister once remarked that the existing system has led to a situation where "checks have tended to overwhelm balances". The fact remains that unless the Services become a part of

the Governmental framework, no meaningful improvement in the set-up is possible. To illustrate my point with regard to the havoc that delays can cause in preparedness, modernisation of the Services and available resources, I take the liberty of quoting the sequence of events which governed the Jaguar Aircraft Project.

Soon after assuming charge as CAS on January 15, 1973, I was asked by the then Defence Minister to submit recommendations of the Air Force in regard to the acquisition of the Deep Penetration Strike Aircraft (DPSA). The needful was done in March 1973. In its wisdom, the Ministry of Defence decided to appoint a Committee of Secretaries headed by the then Deputy Chairman of the Planning Commission and Minister of Planning to consider the recommendation of the IAF and to recommend measures to be taken to implement them. This Committee entitled 'The Apex Body' consisted of the Chairman and 17 Secretaries to the Govt. of India' comprising:

Shri D.P. Dhar, Chiefs of Staff, Cabinet Secretary, Secretary to Prime Minister, Defence Secretary, Secretary Defence Production, Secretary Defence Supplies, Scientific Adviser to the Defence Minister, Financial Adviser to Ministry of Defence, Secretary Ministry of External Affairs, Secretary Civil Aviation, Secretary Home, Secretary Research and Analysis Wing, Secretary Finance, and Secretary Science & Technology.

Fortunately, the Committee unanimously accepted the recommendation submitted by me. The machinery was set in motion only to end up in yet another Committee - Apex II - being appointed to reconsider the matter including some other requests that had since been received from the Service Headquarters. This Committee was headed by Shri P.N. Haksar, comprised of the same functionaries as the earlier Committee. This body also concurred in the recommendations made by the IAF. At this stage negotiations were undertaken by the Ministry of Defence to finalise matters. It is to the credit of our bureaucracy that nothing concrete emerged till I retired on January 31, 1976. My successor's term lasting over two and a half years also expired without any decision. The decision was finally taken during the term of Air Chief Marshal I.H. Latif - A delay of six to seven years in decision making which apart from contributing to unpreparedness of the Defence Services resulted in cost overrun amounting to several hundred crores of rupees. Air Marshal K.D. Chaddha has aptly remarked that Committees are responsible for delays and their consequential adverse effects on available resources.

Defence Planning and Five Year Defence Plans

Attempts at long term planning have been handicapped due to the absence of adequate commitment of resources, even though it is common

Short Reviews of Recent Books

Nationalisation of the Indian Army 1885-1947. By Lt Col Gautam Sharma, *New Delhi, Allied Pub, 1996, p.259, Rs. 275.00, ISBN 81-7023-553-3.*

This subject has featured as chapters or sections of several books by various authors, eg, Professor Stephen Cohen, but this is the first time that a complete book has appeared on the subject. This work has been published as a result of a fellowship awarded to the author by the Indian Council of Historical Research. The author's concern for the Indianisation of the Indian Army in the period in question comes out in the dedication itself, "To the Youth of India who inspite of obstructions by the British proved their gallantry and leadership as Military Commanders". While the author prefers the term "Nationalisation", till 1946 the then Government used the term "Indianisation", though the late Pt Motilal Nehru correctly in 1928 sought to use "de-Europeanisation".

Before World War II it was the stalwart Indian legislators, who pressed the Government for Indianisation. With the onset of World War II, the issue of Nationalisation, changed substantially. After 1939, it was the Government which made efforts to attract Indian youths for the officer cadre. While it is true, as narrated by the author, for the period selected by him, that the majority of the British officers opposed Indianisation, yet many favoured it. In 1885, the Secretary, Army Department, Major General Sir George Chensney, and the Viceroy Lord Dufferin, favoured it, but the then Commander-in-Chief, Lord Roberts, opposed it. Thereafter, Lord Curzon's many endeavours with the War Office could only result in the feudal Imperial Cadet Corps. As late Durga Das has said, "For his times, Lord Curzon was a friend of India". Subsequent Viceroys, like Lords Hardinge, Minto, Chelmsford and Reading, endeavoured to the best of their ability on behalf of Indianisation. Even in the 1939 Indianisation Committee, Major (later Major General and Director Military Training) D.R. Bateman, a witness who appeared before the Committee, as did Major Cariappa, was upbraided by the British Chairman for favouring Indianisation and using terms like "legitimate grievances".

An extensively researched work, both of the National Archives and Historical Division of the Ministry of Defence, but somewhat marred by perfunctory proof-reading and checking, resulting in an avoidable Errata sheet. Errors and omissions excepted, this book undoubtedly has a niche for itself, among the books written on the pre-Independence Indian Army.

— Lt Gen SL Menezes, PVSM, SC (Retd)

Light And Shade In Combat Soldiering : The Evolution of a Good Grenadier Officer, By Brig. Joe Nazareth (Retd), *Poona, The Military Highbrow, 1996. p.119, Rs. 450.00.*

This is an autobiography of an outstanding officer of the Indian Army who

the Amar Jawan War Memorial at New Delhi, India Gate once belonged to a soldier, unknown to history who died on the battlefield on the outskirts of Jessore. There is no inscription on this memorial ... There is an inscription chiseled into the living rock in the War Memorial at Kohima, to those who fell in that World War II battle. It reads -

When you go home
Tell them of us and say
For your tomorrow
We gave our today.

They are equally appropriate for our jawans who laid down their lives in the rice paddies of Bangladesh. Let us not forget them."

On this facet one can only add that our National War Memorial needs to be constructed expeditiously, 25 years after it was first mooted in 1972 by the then Chiefs of Staff.

Overall, an unputdownable read, highly recommended. The author comes across as one of the most devoted and dedicated professional soliders of our Army. The quality of production also needs to be commended. A remarkable book from every point of view.

knowledge that projects of consequence, necessary to meet the undisputed needs of the armed forces have very long gestation periods - The Main Battle Tank and the Light Combat Aircraft amongst others are typical examples.

One is astonished at the manner in which the Five Year Defence Plans have been and continue to be handled. Cases are on record when the Five Year Plans instead of being finalised prior to commencement of the period of the plan have not seen the light of the day two to two and a half years into the five years period. Such plans are as good as no plans at all.

As the Five Year Defence Plans are not assured of any financial commitment, they are of no consequence. It is obvious that the deliberations of the Planning Commission in relation to Defence requirements do not receive the consideration that is warranted. Without any hesitation anyone with a modicum of common sense would opine that the uncertainties of committed financial outlays are a mockery of planning and have been responsbile for adhocism so evident, in force planning and implementation. Putting it briefly, one cannot help but say that we continue to react when it would be wise to act, naturally after due deliberations.

The situation, is aggravated by the fact that our defence accounting, budgeting and in consequence planning are antiquated. These are not linked to the value of money in real terms. The recently published book India's Defence Budget and Expenditure authored by Shri A.K. Ghosh who has spoken from experience over the years bears testimony to this statement.

In relation to this unhealthy situation, resources for Defence are continuously diminishing. We must examine as to how this unhealthy state of affairs can be remedied. Putting it briefly, I would say that to ensure a cost effective, affordable defence posture, it is necessary to move towards sizeable induction of service personnel in the management of defence policies, doctrines and strategy at the Ministry of Defence level. In a rapidly changing environment due to the impact of revolutionary technologies, it is a pity that while the world has moved forward in so far as the management of defence is concerned, we have regressed. We are perhaps the only democratic country in the world where higher military professionals are not an integral part of the governmental framework which is expected to undertake defence planning for future. During the stewardship of Shri V.P. Singh as the Prime Minister an attempt was made to set up a National Security Council. Despite good intention, this body remained still-born. Its major drawback was that the principal National Security Advisers - namely the Chiefs of Staff were not even expected to be the permanent invitees to the meetings of the proposed National Security Council. Inspite of revolutionary responses evident globally, we have failed to

evolve a Defence Management Structure which would be responsive. The pity is that in this particular sphere whilst the developed and in most cases even the developing countries have responded to the challenges by adopting suitable set-ups, we have taken a step backwards. Britain from whom we inherited the organisational structure, decades ago opted for independent integrated Ministries to administer each of the Services in the shape of a War Office, Admiralty and Air Ministry and there are no separate Service Headquarters. In 1954 when the Chiefs of Staff concept was introduced, the then Prime Minister Pandit Jawaharlal Nehru categorically stated on the floor of the Parliament that this step would be followed by the setting up of Integrated Board and Ministries for each of the Services and the Chiefs of Staff would be important functionaries in the Boards and Ministries. Despite a lapse of over four decades, the policy announcement so solemnly made remains burried in the archives of the Government. The powers that be, have deemed it fit to scuttle the set-up which assured, if operated wisely, reasonable framing of national security policies and strategies; by even doing away with the apex Defence Committees - a retrograde step indeed - ***This is no way to ensure civilian control over the military establishment.*** It is time the country reorganised the Higher Defence Organisation on the line of what prevails in the other democracies of the world. This could best be done in stages. Initially the Defence Committee of the Cabinet and the Defence Minister's Committee should be revived and the Defence Planning Staff should be strengthened and staffed by personnel not only from the Defence Services but such organisations as MEA, Ministry of Finance, Industry, Academics, Scientists and Technologists to act as the Think Tank and to provide secretarial services to the Defence Committee of the Cabinet, Defence Minister's Committee and the Chiefs of Staff. Simultaneously, steps should be taken to institute functional devolution of resources. Once we revamp the Higher Defence Organisation, the existing disjunctions between the Government and the Higher Military Organisation, which is currently a serious handicap, would be eliminated; the induction of professionals in the management of defence would definitely help in sound decision making and be instrumental in the Service Head-quarters eventually disappearing due to merger with respective Board and Ministries.

It is time that the Government pays attention to the wasteful expenditure that is currently in vogue. We all know that as matters stand today the expenditure on personnel in the Armed Forces is a sizeable percentage of the total Defence Bill. The fact that we have a large population of pensioners, the expenditure on pensions is high and is continuously rising.

Both these factors arise from the fact that progressively we have increased the Colour Service from what existed earlier, namely five to seven years, to much higher figures. As a consequence availability of resources are

commanders ... He was well-served by Maj Gen Lachhman Singh who commanded 20 Mtn Div. This Division had to clear some of the heaviest enemy opposition in the campaign. Lachhman Singh secured his objectives as planned".

"Lt Gen Sagat Singh had dash and personal courage ... His divisional commanders Maj Gen `Ben' Gonsalves and `Rocky' Hira and Krishna Rao, displayed initiative and were largely responsible for the success of 4 Corps whose offensive was swift and well-executed. Overall credit must also be given to Lt Gen Sagat Singh who was the driving force behind the 4 Corps Offensive".

"Maj Gen Gurbax Singh Gill was commanding 101 Communication Zone. He had drive and the courage of his convictions ... Gurbax was a fine soldier, down to earth ...".

"Maj Gen Inder Gill took over as Director Military Operations at Army Headquarters in August 1971... An officer of very high calibre, practical, competent and down-to-earth ... stood out head and shoulders, above the other Staff Officers at Army Headquarters."

"Indira Gandhi was Prime Minister during the critical period prior to and during the operations for the liberation of Bangladesh. She realised from the very beginning that intervention was inevitable. As there was no National Security Council, no Chief of Defence Staff and no effective co-ordination of the various intelligence agencies, she was perforce obliged to seek advice from the heads of various agencies and personal advisers ... Indira Gandhi was pragmatic, determined and courageous. She stood up to Nixon and the pressures from the US. She led the nation to its greatest military victory, restoring our prestige and raising India's status to that of a regional super-power ... The liberation of Bangladesh was Indira Gandhi's finest hour ..."

"Perhaps the most important role played during my tenure was by the Chief Engineer ... much of the credit for our success in the operations in East Pakistan should go to Brig `Baba' Bhide".

The sentient author rightly concludes on an emotive and evocative note, "The rifle and helmet that form the centrepiece of

the pro-Pakistani stance of China and the USA are highlighted by the revelatory appendices, some published earlier by the columnist Jack Anderson, in addition giving a first-hand account of the negotiations leading to the signing of the Instrument of Surrender. In the event, however, the once-in-an-era advantages gained on the battlefield were squandered in the political negotiations at Shimla in Nov. 1972. The sequential geopolitical environment resulting from the creation of Bangladesh was not adequately understood. A chapter on "Lessons" objectively analyses our adhoc higher command set-up for war.

Throughout history, the conduct of military operations has been shaped to a considerable degree by the personalities involved, as also the inter-se relationships between them. The encapsulation of the performance of the 'Dramatis Personae' is succinct. I quote only some of the many incisive personality sketches in the sequence recorded, lest we forget their contribution.

"Air Chief Marshal PC Lal, Chief of the Air Staff... was a highly pragmatic capable officer, down to earth and practical... Gen Sam Manekshaw was the Army Chief at the time of the greatest Indian Victory in recent memory ... He had stood up for the Army ... He was a man with commanding personality ... Thoughout this crisis Manekshaw conducted himself with great dignity ... He was dedicated to the Army, and upheld its dignity. As Army Chief and Chairman of the Chiefs of Staff during the 1971 war, the overall responsibility for operations was his ... Sam can rightly take his place among the great leaders of independent India".

"Jagjivan Ram ... was perhaps the best Defence Minister we have had. He had an excellent grasp of military strategy. It was Jagjivan Ram who made sure that the requests of the three Services - manpower, weaponry, equipment and infrastructural facilities ... were provided as far as possible".

"Of the Corps Commanders, Lt Gen Mohan Thapan stood out as a man of principle and conviction. He had professional integrity and was competent. He oversaw the operations of his Corps effectively. He was well-liked by his staff and subordinate

adversely affecting the state of readiness of the services. The services can and should remedy this situation for more than one reason. It is time we reviewed the position and reverted to shorter Colour Service not exceeding a total of seven years including the training period which must commence with the recruitment age of 16 to 17 years thereby ensuring a X Class educational standard on entry and induction of trained manpower into the regular Cadres between the age of 18 to 19 years. The Colour Service would then end when the personnel are between 23 and 24 years of age. The short Colour Service should be coupled with a guarantee of continued employment upto the normal retiring age on the civil side. This can best be achieved by statutorily assuring entry into the Para-Military Forces after a span of service in the Armed Forces. Such a step would also be instrumental in saving expenditure currently incurred by Para Military Forces on training of raw manpower. The size of the Para Military Forces is so huge that if the Government were to statutorily mandate that all recruitment into the Para Military Forces would be through the Defence Services, all retirees would be suitably absorbed and in addition the following benefits would accrue:

(a) The Armed Forces will remain young and fighting fit.

(b) Para Military Forces would automatically become standing Reserves to the Armed Forces.

(c) The heavy expenditure that is incurred on training of Para Military Forces would be drastically reduced.

(d) The cost of the infrastructure such as housing, medical and so on, required to be incurred on the Armed Forces will reduce substantially; making possible greater degree of satisfaction in a reasonably short time.

What has been opined during the Seminar is sound and constructive. I would, however, like to ask where do we go from here? Without meaning any disrespect, I feel that no useful purpose is served unless our aim in holding such Seminars is clearly understood. I do hope it is not merely to "convert the converts" by bringing together people, men in uniform and defence retirees who can think, interact, speak and throw up valid suggestions. That should not be the end. Unless there is energetic follow up action on the recommendations and the consensus that such a Seminar throws up, the Organisers would be guilty of wasting the time and energy of those of you who have made it convenient to be here. I, therefore, suggest that we should evolve a machinery that will vigorously pursue the valuable suggestions that emerge from such deliberations. Prof. Karnad's suggestion that the retirees associations

should play an effective role in such matters, is welcome and sound. This will call for fundamentally changing the charters of these Associations and their role. In my view the USI and the IDSA are two Institutions which could help to form 'Think Tanks' and 'Pressure Groups' to undertake the following tasks-

(a) Suggest measures ensuring efficient handling of issues relating to National Security, beneficial for the Armed Forces and the country in general e.g. long term planning for Defence, from which should emerge the five year plans duly supported by committed resources.

(b) Make representation to the powers, that be, in respect of the main issues till these are sympathetically considered and those found acceptable, implemented.

(c) To educate those who are policy makers, namely, the political leadership.

(d) To advocate enhanced expenditure on R&D with accountability, ensuring self reliance and indigenous design and manufacturing capability within the country.

And finally, I agree that as a permanent solution, we should work for the setting up of a National Security Council and the appointment of a National Security Adviser on the lines of the U.S.A. Such a step though a major departure from the current set up will, I feel, help in effective management of the Defence set up and the availability of the requisite decision making apparatus and infrastructure, so necessary and vital for ensuring National Security, naturally within the framework of foreseeable threats and national resources.

Review Article

Surrender at Dacca*

LT GEN S L MENEZES, PVSM, SC**

As is well known the 1971 campaign for the liberation of Bangladesh was swift, some 13 campaigning days, conducted on riverine terrain, eminently suitable for defence. It is the greatest feat of our post independence military history. The official account has not yet been released. As to this book, at the very outset it needs to be said that the narration could not be more authoritative, in as much as the author was Chief of Staff at HQ, Eastern Command, Calcutta and thus Chief of Planning Staff in the East for a campaign that was thrust on India. Lt. Gen Jacob is well known as a cerebral military writer and, in this book, he has excelled himself. A comprehensive yet concise magnum opus, covering success, failures and shortcomings, objectively.

The events leading to the creation of Bangladesh, beginning with the Pakistan Army's crackdown in East Pakistan on 26 March 1971, to the outbreak of a full-scale conflict following the Pakistani bombing on Indian airfields in the West on the evening of 03 Dec 71, and the subsequent military operations leading to the surrender of Pakistan's Eastern Command, are lucidly encompassed. The exposition of the evolution of the strategy for the campaign is masterly - the selection of the thrust lines using subsidiary dirt tracks that by-passed centres of resistance, axes of maintenance being opened up later. The objectives selected were communications centres in relation to the geopolitical heart of East Pakistan - the capital, Dacca. The great contribution the Mukti Bahini made in the liberation of the country is emphasised.

The pressures exerted on India at the Security Council and

*Surrender at Dacca : Birth of a Nation, By Lt. Gen J.F.R. Jacob, New Delhi, Manohar, 1997, p. 263, Rs. 400.00, ISBN 81-7304-189-X.

** Lt Gen SL Menezes is a former Vice-Chief of the Army Staff and the author of well known book *Fidelity and Honour : The Indian Army from the Seventeenth to the 21st Century*, New Delhi, Viking, 1993.

b) Category II - same as Category I but cannot erase.

c) Category III - authorised only to read data.

The author has also suggested excellent counter measures which are equally applicable to us, in the Armed Forces, as under:

a) Avoid LAN or WAN.

b) Use coding for sending data.

c) A total ban on outside floppies.

d) Purchasing only sealed floppies.

e) Test all free software and gifts with the computer books.

f) All new software be tested through experts for virus.

The author has gone into all the finer aspects of data security system which is a real security hazard in the present scenario, if not checked at the root level. The article gives a deep insight into the importance of data security and is highly recommended for anyone interested in the computers, from PCs to Pentium.

Yours Sincerely,
Maj P Kumar

Indian Naval Doctrine and Force Structure

VICE ADMIRAL (RETD) S MOOKERJEE, PVSM, AVSM

White papers on Defence are periodically issued by security-conscious powers. These documents provide comprehensive analysis and explanation of the country's defence policy factored on national interests, threats thereto, strategic environment, technology and finance. Tax paying public are kept informed how the nation's security is planned to be safeguarded. And more importantly, these documents convey a message to the international community.

Practice in our country has been for the Ministry of Defence to publish annually, a report which is placed on the table in our Parliament. For all practical purposes, the report catalogues acquisition or possible acquisition of defence hardware by countries in the region, China and Pakistan in particular - and planned acquisitions of hardware by our armed forces. In press interviews, top defence brass make statements about missions, arms procurement in the region and express views on adequacy or otherwise of funds to make good, perceived deficiencies in our defence preparedness. Whilst leaving doctrinal issues and preferred hardware to the service headquarters, our government exercises budgetary control on an annual basis. Resource constraints during past several years, some public statements by Defence top brass and the impending General Elections have made national security a major electoral issue. I will address myself to the naval aspect of national security.

Naval Headquarters have taken the position, supported by the Parliamentary Standing Committee on Defence that unless we have a 125 ship navy with an unspecified number of Air Defence ships and standard frigates - whatever these might be - our naval preparedness will fall below the required level by 2000 AD. In its 1995 report, the Standing Committee has urged the Government for replacement of Vikrant and placement of orders for six ships annually to reach and maintain the 125 ship level.

Navies are modelled to deter threats by having naval power appropriate to threats a nation faces. First, ship or tonnage count measurement of naval power, in vogue during centuries preceding World War II, has lost its legitimacy due to burgeoning technology since World War II. Contrary to assertion

Vice Admiral S. Mookerjee is a former Vice Chief of Naval Staff.

Journal of the United Service Institution of India, Vol CXXVII, No. 527, January-March, 1997.

at a high level, quantity no longer has a quality of its own. The golden rule, according to naval strategists, including late Admiral Goroshkov is to increase offensive - defensive capability of the fleet appropriate to the threat. In his classic work "Sea Power of the State" written in 1978 on the subject of air defense at sea, the great Soviet strategist was of the view that "greater part of effort should be to combat increasingly long-range missiles launched by the enemy, cutting down the efforts aimed at destroying the carriers of these weapons". It may be known that a major priority of United States Navy is setting up, onboard and ashore, an anti-ballistic missile defence system. There are several nations in our region who possess long range cruise and ballistic missiles. To claim that Air Defence Ships - euphemism for light fleet carriers - can provide missile defence at sea, is misleading the public. Equally misleading is the doctrine that Air Defence Ship - centered battle groups are answers to the impending acquisition of Agosta 90 B submarines and P 3C Orion aircraft by Pakistan. A navy built around light fleet carriers only frighten weak naval powers in the region and make us vulnerable to the charge of hegemonism. But, as navies in the region get stronger as indeed they are and submarines continue to proliferate, even this dubious reputation will become vulnerable.

Inevitable and logical question that arises is what is this Air Defence Ship centered 125 ship Navy for ? What are their missions? As stated in the Annual Report of our Ministry of Defence and repeatedly articulated in the print and electronic media, our navy's primary missions are protection of our Vast Exclusive Economic Zone (EEZ), Sea Lines of Communication (SLOC), long coastline and outlying territories. Since the ratification in 1994 of the 1982 Laws of the Seas Treaty, effective control of EEZ has undoubtedly assumed importance. But, functions involved are constabulary and squarely fall in the domain of our Coast Guard. Although, except for Pakistan and Bangladesh, maritime boundaries with other contiguous coastal states have been mutually agreed, disputes arise. Force has been applied and low key exchange of fire, in disputes over fishery rights and ownership of islets has taken place in Asia Pacific and the Atlantic. In some cases, naval posturing has been resorted to. But, full fledged naval hostilities are fought over deeper political issues.

Mahanian concept of protection of SLOC as a primary naval mission, continues to hold sway. With the end of cold war, global wars have become most unlikely but littoral wars, very likely. Such wars are of short duration and limited in scope. In none of the many conflicts including Falklands War since World War II, in which naval units have taken part, trade has been interdicted except at the terminal stage in cases of hostilities between contiguous countries. What has taken place in most cases is unilateral or multilateral sanctions by developed nations, thereby affecting availability of goods for transportation by sea.

III

Dear Sir,

The article "Data protection and Information Security" by B. Raman in USI Journal of Jan-Mar 1996 highlights the importance of data security in the present environment where everything depends on computers and most of the data is stored in the hard disk of the system. These systems are not only connected within the offices on a local area network (LAN) and wide area network (WAN), but are also connected to the super information highways like Internet. This ease in flow of information is causing a lot of problem to the security managers who are posed with problems like 'time bomb' and 'trojan horse' and hackers sitting in Russia have been able to electronically transfer huge amount of money into their account illegally from the US banks even without stepping in the US!

The author has covered the vulnerability of information technology (IT) systems, parameters of good data security system, risk management and counter-measures. In the present scenario of high vulnerability to it, where a hacker can break into the highly sophisticated data protection system of the banks, there is no denying the fact that our local system and hard disk becomes highly vulnerable and the author describes a good data security system in four categories from outstanding to bad. He has analysed the problem and attributed this to mainly three factors, as under:

a) Human element.

b) Technical element.

c) External element.

As a certain check, the author has given three categories of persons who are authorised to handle the sensitive data, as under :

a) Category I - authorised to read, input, modify and erase data.

task completed by careful set of instructions are termed as black sheep and they can most of the time forget about getting more brass on their worthy shoulders.

F-21/12, Noida

Yours Sincerely,
Capt. Puneet Gopalam

II

Dear Sir,

Brig. R D Law's article on Light Armour published in your Jan-Mar '97 issue made very educative reading. Although I fully agree with his contention that the reconnaissance factor is an essential one for armour operations, I am sceptical about the raising of the seperate light armoured regiments for this purpose, in our context. The physical distance covered by armour in our case, is negligible. I don't think it will make any difference to our armour operations, even if we had reconnaissance regiments as of yore. Our problem is the incorrect employment of armour. Brig. Law, in an earlier article highlighted the value of "concentration", a principle that we have consistently flouted - herein lies our problem. We are wary of taking calculated risks with armour.

The terrain where armour operations are visualised, along our border, is rife with successive water obstacle based defensive networks. What is required to overcome this is the air land battle mode. Brigadier Law's suggestion to expand our Army aviation is the only way to ensure this capacity. We should have one infantry division per strike corps on air-land battle mode.

On Brig. Law's reference to surveillance, we must comprehend the gamut of information warfare. We should have information regiments in lieu of reconnaissance regiments. We should also have three armoured brigades on the establishment of an armoured division in place of the current two and they must be armour heavy. The self defeating independent armoured brigade should be scrapped and the armour commanders should be risk takers!

Yours Sincerely,
Lt. Col J K Dutt (Retd)

Protection of coastline and outlying islands has been a very important naval mission for centuries. But, the end of colonialism and diffusion of power that can be brought to bear upon an invading force, makes such threats unreal.

Much is heard of the mission of sea control – a scaled down version of Mahanian philosophy of 'Command of the Seas'. Command or control to achieve what? How do ADS centered battle groups establish control over submarines or aircraft with stand off missile capability. Admiral Standfield Turner, ex Chief of Naval Operations in US Navy has gone on record saying that even the mighty United States Navy can, at best, hope to enjoy, limited sea control over limited areas for limited periods.

Our current naval doctrine, missions and force architecture lack credibility and legitimacy because of the absence of a systematic approach to national security. We continue to embrace the model we inherited from the Raj at the time of Independence. In security calculations, the bottom line is identification of own core national interests.

To define realistic threats to our national interests, strategic environment needs to be analysed. Technology and finance will then be our guide to the naval component of our national security policy.

In defining our national interests, I can do no better than focus attention on our President's message to the nation on the eve of our Independence Day, 1995. The goal of national security, he stressed, was to prevent international efforts to destabilise India and the region. He expressed deep concern at efforts by big powers to disturb peace and stability. More importantly he asserted India's unflinching opposition to discriminatory efforts to stymie our missile, space and nuclear programme. As significantly, he notified the world that, the world's largest democracy will not yield to pressure wherever it came from. Our President, in short was telling the citizens of India and adversarial big powers that India's vital interests go beyond territorial integrity and encompasses resolute opposition to coercive diplomacy, technological monopoly and destabilisation. Considering that international bossism comes mostly from extra regional powers, naval power becomes an important tool for our defence. Our defence policy must break out of the shackles of continental mindset and naval missions of World War II vintage.

The strategic balance that prevailed during the cold war, has yielded to a unipolar world, presently dominated by World's predominant military power. The other macro change has been the shift of global focus from Europe to Asia. Pursuing a policy of selective containment in Asia, USA is trying to prevent the reemergence of Balance of Power in a multipolar world to include emerging and potential bigpowers in Asia. USA's declared policy of dual containment of Iran and Iraq, expansion of its sphere of influence to control

Asian Islamic states as a potential counter to historically nationalistic and nuclear super power of Russia, have made Pakistan a frontline strategic ally of USA. USA sees China as an ally of Pakistan, as a strategic counterweight to Russia, Japan and India. Hence USA's muted stand regarding China's entry into Bay of Bengal via Myanmar and China's assistance in missile and nuclear field to Pakistan. What is very disturbing is USA's declared policy of projection of power at short notice over great distances to exercise deterrence, coercion and intervention if necessary, in two major regional disputes.

There is growing consensus in India that USA's adversarial policy towards India which commenced in 1954 with security pact with Pakistan, has intensified in recent years. There is also growing resentment in India against USA's double speak and heaping of diplomatic threats on India for her missile, space and nuclear programme. Public opinion in India is veering to the view that in Pakistan's proxy war to de-stabilise India, the smoking gun is in the hands of USA.

Arrogant antagonism of world's militarily sole superpower is bad news for India. In structuring our strategy to protect our vital national interests, we must take into account the sunny side as well. First, people and government of USA, dread the prospect of casualties in pursuit of activist role in international affairs. Routed in her Vietnam experience, fear of body bags has been attributed by US scholars to new family demographics of low birth rate, mounting socio-economic problems and resurgence of neo isolationism. This national mood is fuelled by what has come to be known as CNN Factor. This Achilles Heel of US power is good news and an important determinant of our strategy at sea, on land and in the air. Perceived ability of nations to inflict damage and casualties on US forces is an important influencer of US policy and action abroad. Secondly, post cold war ascendancy in geo-economy, change in the nature of probable future conflict from global to littoral have enhanced the role of geography in our strategy. India's central location in Indian Ocean gives her easy access to four important waterways of the world - the Atlantic, the Pacific, the Gulfs of Aden and Arabia. This geo-strategic advantage offers India a stellar role in ensuring peace, prosperity and stability in the region.

While India must continue her policy of constructive engagement with USA, Pakistan and China and deepen her friendly relations with European Union, coastal states in Indian Ocean and Asia Pacific regions, our diplomacy, to be effective, must be backed by force and visible resolve to deter interference in our sovereign right of independent decision making. A soft and militarily weak state invites coercion and aggression. In post Cold War strategic scene, deterrence of aggression on our land frontiers is not enough as the aim of our military strategy. We must have power and naval power - an important constituent of it - which is perceived to be capable and willing to impose

Letters to the Editor

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

I

Dear Sir,

I read the article "SURPRISE DECEPTION AND UNPREDICTABILITY IN OPERATIONS" by Major General B.S Malik (USI Journal, Jul-Sep 1996).

It made interesting reading as it struck the right cord in the soldier who has donned the uniform for professional satisfaction and adventure. However the spirit of doing the thing differently is mostly viewed as being rebellious unless one is lucky to have like-minded Commanding Officer. There is no doubt as officers rise in service and rank they tend to play safe. To an extent it is correct for they have greater responsibilities of commanding formations. What actually is a matter of great concern is when this attitude is stretched to absurd levels. No matter how differently and successfully a task is done by young and sometimes older officers, appreciation and acknowledgements are hard to come by.

The concept of a "gunman, poacher and gambler" being the virtues of a good soldier are unheard of in the academia. Most of the officers are fed on a dose of advantage of getting good gradings and annual Confidential Report rather than being imbibed with a spirit of adventure and risk taking for it is failure prone.

The zero error syndrome is like a virus which is degenerating our Army. Officers are doing jobs and tasks, previously looked after by the NCOs and the JCOs in order to over ensure things. Getting a job done correctly is being seriously misinterpreted as doing the job yourself without any mistake. Such an attitude is prevalent more so, when a senior officer visits a Unit or an Officer's Mess. Those not adhering to this norm, but still getting the

have suffered the fate it did; if the nations of the subcontinent had not been involved in infighting. The question that should be foremost in everyone's mind is "who is going to put a stop to this madness which is dragging everyone down"? For nobody can claim to be winning. Everybody knows that they are losing. Meanwhile, the subcontinent from Kabul to Kashmir and Karachi to Colombo sinks deeper into the mire.

History cannot be unmade, whether it be of the last thousand years or of the last five decades. Nobody can go back in time to 1946 or 1947. It is not possible. It is not desirable. The scars left by the bloodshed of partition and the post-partition conflicts cannot be easily obliterated. It is possible, however, to pause for a moment and take stock. The people of the subcontinent are more than ready for sensible accommodation. A start can be made by rooting out the purveyors of hatred from every corner of the subcontinent. The daily tirade of hatred beamed at each other must cease; the world also must be spared the constant agony of being subjected to this incessant bickering.

JOIN

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substantial casualties and damage to restrain attempts at coercion and intervention.

Technology will play a decisive role in profiling this power. Technology has changed the crucial offensive defensive balance of maritime forces. The balance has tilted firmly in favour of submarines, particularly in submarine friendly Indian Ocean. Submarines have become capital ships of today and in foreseeable future. Fitted with missiles and in alliance with shore based long range multi role maritime aircraft with stand-off missile capability, Indian Navy will be eminently able to exercise defensive deterrence against big power navies in Indian Ocean region. Our ability to apply power at sea will be immensely enhanced if our government permits, and provides required funding to our scientists and engineers to take our missile, space and nuclear programme to logical conclusion. Technology is a threshold phenomenon. Since this hurdle has been crossed, only colossal ignorance of our long term strategic interests by the government has bound the Prometheans. Assuming a change in policy, India's power at sea in the waters of our interest will be augmented by improved capability for surveillance and shore based long range cruise and ballistic missiles. Our submarine centered navy will also make our nuclear weapons option - should we choose to exercise it - very credible.

Technological changes in recent decades, have substantially enhanced detectability, locatability and as importantly, vulnerability of surface ships from stand off missiles and torpedoes. But surface ships will be needed for specialist functions like mine countermeasure, amphibious operations, constabulary function in EEZ, training and sea lift for selective peace keeping functions. Surface ships with what one might call second division armament, sensors will serve national interests well through flag showing visits during peace time, and naval presence or posturing in less than war situations or conditions of violent peace.

A serious disability of our naval doctrine is that it is almost exclusively hardware oriented. Most effective force-multiplier is highly motivated quality manpower. As we should have learnt by bitter experience that surfeit of quantitative manpower acts as force reducer. With progressive economic growth, armed forces will have to be severely competitive to attract talent. International trend is drastic reduction in manpower to make services lean and mean with striking power and survivability.

Finally, in formulating doctrine and force structure, a crucial issue is defence expenditure. Even the most affluent countries apply scrutiny, as across the board defence and naval capability is not affordable. There are numerous schools of thought on the issue of reasonableness of defence expenditure. The extreme anti-defence lobby holds the view that one paisa spent on defence is a loss to development. But, examples of France, South Korea in the past and

ASEAN countries in recent years, show that high defence expenditure and high economic growth rate can co-exist. Econometric studies have shown that there is no casual relationship between defence and development - adverse or otherwise. Development gets stymied by wrong economic, monetary, and fiscal policy and large scale corruption, poor productivity and quality. The second school takes an accountant's approach to reasonableness of defence expenditure. Usual yardsticks are big percentages of Gross Domestic Product or Central budget or Centre cum State budget, of population in uniform or per capita expenditure. Such yardsticks have their uses but fall flat when GDP is very high as in the case of Japan. Defence expenditure is not only reasonable but essential as long as it is anchored in well thought out strategy, doctrine and force-mix which have credible capability of safeguarding and furthering our vital national interests. Expenditure must pass the test of cost effectiveness, all avenues for economy explored. In short, money must be spent wisely. One thing for sure, increasing naval share of defence cake is not an end-in-itself. Nor does it necessarily enhance security.

In conclusion ship count approach to naval power and engineering it around light fleet carrier battle groups has become flawed due to technological changes since World War II. Our stated naval missions are also flawed against the backdrop of strategic developments since the end of Cold War. To safeguard our vital national interests, it is not enough to deter aggression on our land borders. We must, in addition have the capability to apply power at sea to raise pain threshold of adversarial extra regional powers. To achieve that power, we need a twin track strategy. The fast track is, in the submarine friendly strategic Indian Ocean, a navy centered around modern submarines in alliance with long range shore based multirole aircraft with stand off weapons. The slower track is to give our scientists a free hand to carry to logical conclusion the progress already made in missile, space and nuclear fields. Inspite of decline in survivability of surface ships, these will continue to play important roles in support of the main strength element, specialist functions and importantly in conditions of peace and violent peace. With quality hard ware, quality manpower is a force multiplier and an essential part of naval doctrine. Defence expenditure should be judged by the criteria of cost effective defence of our vital national interests. If we manage our economy better, prevent leakages of national income, explore all avenues of economy in defence expenditure and spend money wisely, funding will not be a constraint on the recommended doctrine.

separation of fifty years - an aberration viewed from another perspective - cannot efface overnight, the shared existence of a hundred generations of common ancestors, tilling and mingling with their sweat, blood and tears the same soil. A reading of the shared history shows that there were periods of extreme turbulence, intense religious persecution, uneasy co-existence and periods of harmony. The periods of productive harmony were the makers of a historical landscape of the last millennium; which witnessed an unique blend of art, architecture and music that enriched the subcontinent. It is as much the heritage of every Indian of today as that older heritage that moulded the spirit of this ancient land, which is re-emerging to shape the destiny of India, the subcontinent and mankind.

One more aspect which cannot be glossed over relates to people who changed their religion. The increase in the convertee population over the centuries was not the result of large-sized influx of alien hordes but resulted from a process of conversion. This could have been due to coercion, opportunism or genuine appreciation of the tenets of other faiths.

Whatever the reason for embracing the other faiths, there is no denying that the other fellow is as much a product of this land as anyone else. The faiths may differ but there is no difference whatsoever in the "Indianness" of every inhabitant of India, Pakistan or Bangladesh. They are as much sons of the soil as anyone else; irrespective of the displacements forced upon them in every century by grinding poverty, terror, mass killings, droughts or more recently, the overweening ambitions of some of the leaders of the subcontinent in the years leading upto partition.

The destruction of mosques, temples or shrines is not really helping anyone. It leads only to senseless reprisals, instigated by religious bigots. An even greater loss is the destruction of the common heritage. Which sane person in India, Pakistan or Bangladesh would have been happy at the destruction of Babri Masjid or Charar-e-Sharief or the countless temples. Does not the destruction of Kabul diminish every Indian, Pakistani or Bangladeshi. It is tempting to speculate whether Afghanistan could

Indo-Pakistan Relations : The Quest for Peace

MAJ GEN VINOD SAIGHAL (RETD)

In just a few months from now the subcontinent will be arriving at a Golden Jubilee - that of its partition. And how will the people of the subcontinent celebrate the event. Will there be parades and dancing in the streets; or will the year be heralded by special cannonades along the frontiers. Will there be bigger killing sprees to chalk up a befitting golden score? Or will it be a time for reflection: to ponder over lives lost, energies wasted and opportunities missed.

There can be no mistaking the fact that the problems facing these countries have assumed dimensions not even remotely grasped by their governing hierarchies. Whether these problems relate to ecology, demography, illiteracy, poverty or drugs, they can only be effectively tackled by a joint effort on a subcontinental basis; and that too in the next five or ten years. After that the immensity of these problems will propel the subcontinent into a state of terminal decline. At that point in time it will make scant difference whether India and Pakistan are at war or peace. These two nations by their incessant bickering have not only pushed their respective peoples into a nearly irreversible decline but they have been responsible to quite an extent for dragging down the other nations of the subcontinent as well. Not an enviable record after fifty years of independence.

If the establishments governing these countries are oblivious of all this, then the time has come for the people of the subcontinent to wrest the initiative from their masters, not friends. To begin with, the simple fact that the Radcliffe award was a cartographical delimitation has to be grasped. It is possible to draw a line across a map in one fell swoop and call it partition. It is not possible, however, to delineate a Radcliffe award across millennia of shared history, culture and kinship. The geographical

Light Armour:Descendant of the Cavalry

BRIG (RETD) R D LAW

Light armour is an essential component of any modern mechanised army. Armoured forces cannot develop their full offensive power without light armour which provides them with tactical and topographical information; secures the flanks; ensures safe passage by rushing ahead to seize defiles, bottlenecks and crossing places; protects maintenance routes so that logistic requirements reach the forward troops without hinderance; keeps enemy raiding forces away from headquarters so that they can function undisturbed; in the pursuit assists in turning the enemy's withdrawal into a rout by constantly harassing him on his flanks and after outpacing the enemy cutting in on his route of withdrawal to put stops on his axis of withdrawal; mounts raids in the enemy's rear areas, covers the preparation of defences by delaying the enemy and prevents reconnaissance of the position by the enemy's mobile troops and in retrograde movement facilitates breaking of contact by the withdrawing force by holding off the enemy by offensive action. Light armour is, in short, the maid of all work and an army which does not have light armour or fails to employ it correctly finds itself at a disadvantage.

Light armour has descended from the cavalry which occupied a prominent place in the armies of yesteryear, when no army could be considered complete unless it had a good complement of cavalry on its order of battle. While all modern armies have a complement of light armour, it has for one reason or another disappeared from the Indian Army, which since independence has increased the number of armoured regiments more than tenfold while neglecting light armour to the extent that it has become extinct. The need for light armour was felt during the 1965 and 1971 Indo-Pakistan Wars, the two occasions when armoured forces were employed in some strength by both sides, but no steps have been taken in India to revive it.

While the cavalry performed all the roles which light armour now handles, its primary function was that of reconnaissance which provided information on the basis of which commanders based their plans. Reconnaissance is also the pre-eminent role of light armour. Although there are now several other means of obtaining information like tactical air reconnaissance, air photography, reconnaissance satellites and terrain evaluation based on remote sensing data, light armour is the only source which obtains tactical information

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Brigadier R.D. Law is a former Director of Armoured Corps, Army Headquarters, New Delhi. He has written several articles on armour related subjects including two USI National Security Papers.

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by making contact with the enemy and topographical information by actually going over the ground.

This article studies the evolution of light armour, which traces its lineage to the cavalry, its employment, part played by it in some of the wars fought since the First World War until the recent Gulf War, its disappearance from the Indian Army despite there being a need for it and considers the steps that are necessary to fill the void created by its absence.

THE ANCESTRY

The cavalry was dethroned from its place of honour on the battlefield during the early years of the present century by the improvements in firearms brought about by the magazine rifle firing fixed smokeless cartridges and the emergence of the machine gun. The days of the cavalry charge over open ground with drawn sabres or lances were over. The cavalry had to seek cover afforded by the ground which was more difficult for it to utilise than for the infantry because of a horse and rider being more difficult to hide than an infantryman on the ground. The cavalry, however, still had several important functions to perform for which it was better suited than any other combat arm. Nevertheless, these roles underwent some metamorphosis as a result of the developments witnessed during the period.

The improved power of firearms placed the defender at an advantage over the attacker by reducing the chances of success of a frontal assault against defences. The attacker was compelled to manoeuvre around the enemy's flanks, threaten his flanks and force him to fight outside his chosen and prepared positions. By virtue of its mobility, the cavalry was able to undertake such operations.

The closing years of the nineteenth century and the early years of the twentieth also saw the coming of the railway and the telegraph and the development of road networks on the European continent. These gave the armies there the ability to move and maintain large forces and pass information and orders with speed hitherto not attainable by despatch riders or mounted liaison officers. These developments were not long in coming to India and some other countries, mainly those forming part of the British Empire. Protecting and threatening these facilities, depending upon whether they were one's own or the enemy's became important tasks for the cavalry.[1]

Reconnaissance ahead of the main force had always been the most important function of the cavalry. As the armies grew larger, their movement, particularly for switching from one axis to another, became more difficult and cumbersome. This made it necessary to group and dispose forces so as to

have imposed such a philosophy on the Army and it is Pakistan's misfortune that he was denied the opportunity. (Details of tours to other stations omitted).

NOTES

1. Mohamad, Akbar Khan Major General, DSO in *Raiders in Kashmir*, (Karachi : Pakistan Publishers, 1970) and his interview with Brigadier AA Siddiqi published in *Defence Journal* (Karachi) June - July 1985.
2. Ibid.
3. Khurshid, KH, *Memories of Jinnah (Karachi :* Oxford University Press, 1990). Also audio recording of discussion on *BBC* on 25 November 1991, in the series 'conflicting opinion on Jammu and Kashmir'. Participants were : Professor Alastair Lamb author of the book *'Kashmir : Disputed Legacy'*, Sir Mark Tully the BBC representative in Delhi for 20 years and Dr Wiqar Ahmad of Urdu Service of the BBC.
4. Ibid.
5. Mahajan, Mehr Chand, Chief Justice of India, *Looking Back : An Autobiography*, (New Delhi: *Asia Publishing House, 1963).*
6. Mehdi, SGS, Colonel, *Mehdi Papers, Serial Three,* (Karachi: *Mehdi Foundation, 1987*).
7. Mahajan. He took over Prime Ministership of J and K on 12 October 1947 and plunged into discussion about the accession of the State with Jinnah's emmisary Major Shah who was a Secretary in the Government of Pakistan. His candid account of the drama of accession of Jammu and Kashmir is most revealing.
8. Quoted by Noorani AG in his review of the book *'Kashmir : Disputed Legacy'* by Professor Alastair Lamb in *Frontline* magazine of 27 March 1992.
9. Gul Hassan, Lieut General, *Memoirs (Karachi :* Oxford University Press, 1995). Gul Hassan was asked to be in Lahore to act as ADC to Jinnah during his visit to Lahore even though he had relinquished this appointment sometime ago.

1942 after the departure of Ritchie. It might just have worked, but only if the Indians had made major mistakes. Looking back, I am delighted that our plan remained a concept and never required to be implemented.

Our military tours, therefore, fell into two rather different categories, those to the field force involved in the defensive plan referred to above; the remainder to training units and establishments busily starting to train for the future. The most important operational formation 7th Division to which the main counter-attack role would fall, was stationed round Rawalpindi. It was commanded at first, and until 1949, by a British General, Loftus-Tottenham, a 2nd Gurkha-solid and sensible. Loftus reminded me of Evelegh in style and to some extent in appearance. His common sense gave everyone great confidence. While his deliberate approach to situations well complemented Gracey's fiery temperament. There were also good subordinate commanders in 7th Division, Hyad Din, Ahmad and Azhar Khan, who had done their first service in my Regiment, knew Vic Turner well and delighted in wearing a regimental tie. Many years later in 1982, long after Azhar had retired, when I revisited Pakistan at the invitation of the President, I took him a new Rifle Brigade tie as a present. He was overjoyed and the neat prayer mat he gave me in exchange now decorates the floor of my dressing room.

The all important defence of Lahore was in the hands of 10th Division, commanded by the outstanding Pakistani General of his generation, Iftikhar Khan. 'Ifty' was an admirable commander, with a positive personality to match his considerable military attainment. Tough, sensible and well versed in his formation in his approach to politics. He was balanced and understood the need for the Army to distance itself from such considerations. It was a disaster for Pakistan when 'Ifty', shortly after being selected in 1950 to be the first Pakistani C in C, was killed in an air crash together with Sher Khan by then promoted Major General. The loss of these two officers affected the whole course of Pakistan's history. I doubt if Iftikhar, whatever the temptation and however dire the alternative, would ever have entertained the possibility of a military takeover. He was a big enough man to

obtain the maximum tactical advantage in the first encounter with the enemy. This required correct and timely information for obtaining which mobile troops had to move ahead of the main force. As the direction of movement and the quantum and grouping of the forces to be deployed on a particular axis were dependent upon the outcome of reconnaissance carried out by the cavalry, under the then prevailing measures of time and space, it was categorised as strategic reconnaissance. Today it falls in the region of tactics and is termed medium reconnaissance. In offensive operations the cavalry employed for strategic reconnaissance tasks, after making contact with the enemy devoted itself to tactical or close reconnaissance in order to find out details of the enemy's dispositions and strengths, his weak spots, the siting of his weapons and the locations of his flanks. This also ensured that continuous contact was maintained with the enemy in order to discourage him from shifting or altering his positions. The cavalry, in other words, 'found' and 'fixed' the enemy. Tactical or close reconnaissance sometimes involved attacking the enemy so as to cause him to react and, in the process, disclose his activities and the locations of his main weapons by opening fire from them. Such reconnaissance in force called for the employment of cavalry in some strength, ie complete units or sub-units supported by horse artillery. It could also involve establishment of strong standing patrols and maintaining a constant offensive posture.[2]

Without the information provided by the cavalry, commanders could not plan and arrive at sound solutions to operational problems. The cavalry was then the only source of accurate and reliable information regarding the topography as well as enemy strengths, dispositions and movements. Although terrain conditions did not have the same impact on movement of forces at that time as they do on the movement of mechanised forces today, nevertheless information regarding obstacles, crossing places, defiles and the lay of the ground had an important bearing on operational planning. The commanders of that era did not have access to accurate and detailed maps, air photographs, tactical air reconnaissance reports, satellite images and terrain evaluation based on remote sensing.

Once a defeated enemy force started to withdraw, the cavalry prevented it from breaking contact in order to take up a new position further to the rear. The aim of the cavalry was to force the enemy to fight continuously during his withdrawal. In the pursuit the cavalry assisted the pursuing force by moving on a route parallel to the enemy's axis of withdrawal at a rate of advance higher than that of the enemy's withdrawal and appearing on his flanks to harass him or cutting in behind the enemy to establish stops on his withdrawal route and so turn his withdrawal into a rout.[3]

In defensive operations the task of the cavalry was to deploy ahead of

the defensive position under preparation as covering troops, or a part of the covering troops, to defeat attempts by the enemy's cavalry to reconnoitre and to prevent the enemy from contacting the position before it was ready. In this process the cavalry obtained early warning of the enemy's moves and gauged his strengths. The cavalry also actively interfered with the enemy's preparations for attack by mounting raids on his concentration and assembly areas, administrative units, headquarters and communications.[4]

During retrograde movement the cavalry enabled the withdrawing force to obtain a clean break by holding off the enemy and disrupting his advance by operating offensively, particularly on his flanks, to continuously harass him.[5]

While the cavalry had lost some of its glamour after it was no longer possible for it to gallop across open ground to charge enemy positions, it still had several roles of great import to perform which no other arm could do. It remained the elite arm in most armies and service in the cavalry was much sought after.

THE BOER WAR 1899 TO 1902

Shortage of cavalry was acutely felt by the British forces in South Africa during the Boer War which was fought at the time when the cavalry was thought to have lost its usefulness on the battlefield. Due to the lack of cavalry to operate as mobile troops ahead of the advancing British formations to carry out strategic and tactical reconnaissance, British troops suffered many avoidable casualties by walking into Boer positions which could not be seen until they fired at the approaching British troops at very close range. The Boers sited their positions very cleverly using unorthodox methods and camouflaged them exceptionally well. The Boer war was the first occasion when the British Army had faced an enemy which practiced fieldcraft. In fact the Boers excelled at it. The Boers, who fought as mounted infantry, based their defences on dominating features covering the axes of British advance. They built sangars and dug trenches high up on the forward slopes of the features which were deliberately not well camouflaged. In the lower ground forward of the feature, the distance varying from time to time, they prepared dug in positions which were camouflaged with great care and they could not be seen by the attacking troops until the Boers occupying them opened fire, using smokeless ammunition while those in the trenches and sangars higher up opened fire with black powder ammunition. The British artillery which was invariably ranged on the higher positions engaged them and could not shift its fire down to the lower positions due to the close proximity of their own troops to them. In the confusion that followed, the attacking troops unexpectedly coming under fire,

ners. Though just as intelligent, he was more extrovert than Wajahat, and Douglas Gracey found him admirable company. Bashir had an admirable sense of the ridiculous and regularly regaled us with the latest gossip from within the HQ and also collected on our various tours. His personal qualities apart, Bashir was a fine games player, with tennis as his speciality. Most evenings, after work, he and I would motor to the Club and engage in closely matched contests, usually over three sets, though sometime darkness would stop play before we had time to reach a decision. Bashir too had an excellent subsequent career. Tragically, for his family and for Pakistan, it was cut short by his death in a helicopter accident, while he was acting as Chief of Staff of a division at an unusually early age. Otherwise he would surely have risen rapidly higher and proved a challenger for posts at the very top of the Pakistan Army. Like Wajahat, Bashir Babar was a man of great integrity and high quality. I enjoyed serving with them both and owe them much for their loyalty, efficiency and good company. (A portion describing the office routine in the GHQ is ommitted).

As I have already indicated, Douglas Gracey was, by temperament, an outside General and liked to be away from Rawalpindi on tour whenever possible. These tours were the best part of the job, and I needed little encouragement to set them up. There was plenty to see, it was stimulating to watch a new Army taking shape and, the defensive battle in Kashmir apart, there was an operational plan to make for the defence of the West Punjab. Douglas Gracey explained to everyone and soon managed to get the principle accepted that Pakistan had no hope emerging victorious from a war with India. The latter's resources were altogether too strong; the only hope of success would be if India attacked first, became unbalanced in the effort to capture the huge city of Lahore 10 miles inside the Pakistan frontier and so became vulnerable to a well timed counter attack. In this context all depended on correct positioning of Pakistan's only armoured brigade and the timing of its move by rail over the Jhelum Bridge before deploying into the Punjab plain. In 1948 Pakistan had no Corps H.Q. Thus Gracey planned to direct the operation himself much as Auchinleck had done with Eighth Army in the Desert in

good in his new incarnation. He specialised in tour programmes and the all important matter of relations with the Air Force about our Dakota. There was only one V.I.P. aircraft in Pakistan for the services at that time, and some forethought was needed over planning itineraries. Douglas Gracey needed little persuasion before accepting my idea that we should go for two Pakistan ADCs. I had known them both at the I.M.A., where they had been under Officers on the first course. Though both were cavalry officers, they were very different in character and outlook. Wajahat Hussain, delightful, courteous and well educated, came from Aligarh in the United Provinces. His parents were professional people and well known to Liaqat, the Prime Minister, whose provincial origins were similar. In the special circumstances of the new Pakistan, this link proved very useful, Wajahat often, and always tactfully, provided invaluable input to our deliberations. In keeping with his position as an officer in the Guides Cavalry, Wajahat was a fine horseman; he had won the equitation prize at the I.M.A., and was already developing well as a polo player. It was no surprise, and a great delight to me, that Wajahat had a distinguished subsequent career, which led through command of his regiment, an armoured brigade, a division to Commandant of the Staff College in Quetta at the time of General Zia Ul Haq's coup which unseated President Bhutto. Wajahat's background and outlook made him, in Zia's opinion, unsuited for high military command in his dictatorship. Instead, partly because of Wajahat's own qualities and also because they had been brother officers in the Guides Cavalry, Zia transferred him to the Foreign Service. Wajahat was thus first Ambassador in Athens, where my wife, Jean and I gave him lunch on one of our business tours and, subsequently in Australia, where he achieved considerable success and proved a fine representative of his country. Happily Wajahat has remained a great friend and Jean and I look forward to entertaining him and his wife whenever they can come to England.

Bashir Babar, the other ADC, from Probyns Horse, was a Pathan from a country gentleman style of family, not far from Nowshera in the North West Frontier Province. Like Wajahat, he was beautifully turned out and had the same impeccable man-

it took them a little time to gather their wits and locate the Boer positions. The Boers utilised this opportunity to slip around the feature and reinforce the upper positions by moving into them or to get back to their ponies kept in a laager to the rear of the feature and gallop off to the next position, having obtained a clean break. More often than not the British forces had no cavalry or other mounted troops available to follow the retreating Boers.[6]

Owing to the lack of cavalry resources for reconnaissance the British formations had no means of finding out the locations of the Boer positions and obtaining information regarding their strengths, layouts and locations of weapons until their advancing troops made contact with them. With the Boers frequently changing their tactics British troops could never be certain of what to expect on contacting a new position. Cavalry moving ahead could have saved many British casualties and made it difficult for the Boers to break contact so easily on withdrawing from one position to another. Occasionally the British sent up balloons for observation, but as they had to remain over their own lines and due to the excellence of the Boer camouflage not much worthwhile information could be gained by this method.

These difficulties led one of the British Commanders, Lord Roberts, to declare that the first duty of a commander was reconnaissance[7]. In saying this he was not so much alluding to personal reconnaissance by the commanders, but the employment of mobile troops and other means to gather information, both tactical and topographical. In this respect he and other British commanders were greatly handicapped by the inadequacy of cavalry resources in South Africa. For the shortage of cavalry the blame rested squarely on the British Government which grossly misconceived the type of fighting to be expected in South Africa against the Boers. When offers of help were received from the Colonies, the British Government conveyed it to them that infantry was most needed and cavalry the least acceptable.[8]

The British troops in Natal were somehow better provided with cavalry, but their commanders made little use of it. The cavalry was not even employed to obtain topographical information despite the non-availability of accurate maps. At Colenso the alignment of the Tugela River was incorrectly shown on the map. A loop which existed in the River was not indicated on the map. Orders for the attack were issued on the basis of the incorrect map, not taking the loop into account, although it was of material tactical significance. When the loop was encountered during the attack, the attacking troops faced avoidable difficulties. There were also occasions when positions thought to be held by the Boers, when actually attacked were found to be unoccupied.[9]

The First World War 1914 to 1918

In France, the main theatre of operations, there was little scope for employment of cavalry in its traditional mobile roles. The static nature of trench warfare, with the no man's land between the opposing forces swept by a heavy volume of small arms, machine gun and artillery fire, rendered it virtually impossible for the cavalry to move without suffering unacceptably heavy casualties. Cavalry regiments in France, including some Indian ones, manned trenches and fought as infantry.

In other theatres like Mesopotamia and Palestine, where the fighting took a more mobile form, the cavalry played an important and significant part. In Palestine a substantial strength of cavalry, was deployed. Full advantage was taken of the cavalry to give the fighting there a mobile form. Some Indian and Indian State Forces cavalry regiments earned laurels there operating in traditional cavalry roles, including mounted cavalry charges, even though they had become difficult and expensive to execute due to the increased lethality of firearms.

The advance to Aleppo saw the first ever use of mechanised troops in the role of mobile troops to lead an advance. For this operation the leading column which was based on a cavalry brigade of two regiments, Jodhpur Lancers and Mysore Lancers, included three batteries of armoured cars and three light car patrols, and was supported by a squadron of the Royal Flying Corps. The armoured cars led the advance over a distance of about 120 miles in five days, a remarkable achievement for those days. Having contacted the defences at Aleppo the armoured cars and the light car patrols switched over to close reconnaissance in the course of which they gained valuable information. Finally, the armoured cars took part in the attack on Aleppo with other troops. This small armoured force showed the way to the future when light armour was to completely take over the functions of the cavalry.[10]

Post World War I Years

With the development of the internal combustion engine the days of the horse as a means of battlefield locomotion came to an end. The mechanisation of the cavalry and the phasing out of the horse could be clearly foreseen. The British had employed the tank during the War in France to break the deadlock of trench warfare. During the 1920s a few forward thinking British Army officers like Fuller, Martel and Liddell Hart applied themselves to the question of the shape of wars in the future. They all came to one conclusion that in future wars the tank would be the primary weapon and in tank mounted or armoured divisions the place of the cavalry would be taken by light armoured units equipped with light tanks, or tankettes as they were then called, and

about political aspects. This was not always easy, though I found my boss a good listener on our many long car journeys round Pakistan. He was a quick reader too and not too pernickety about letters drafted for his signatures, provided these were explicit and unambiguous.

Just before Messervy left, the assassination of Gandhi on 30th January gave us a day or two of acute anxiety. I remember getting the news on the radio and recall our intense relief, when we heard that the assassin was an extremist Hindu, and fortunately not a Muslim. Gracey was at his best in such situations and seldom over-reacted. "Never take counsel of your fears", he used to say an expression he told me he had acquired from Bill Slim, and one I have often found useful myself, in many commercial as well as military contexts.

I think Douglas Gracey found the last few days before Messervy's departure a considerable strain. Their temperaments were totally alien, Messervy's phlegm contrasting sharply with Gracey's dynamism. Messervy seemed to me a procastinator in many ways, though as a Corps Commander in Burma he had won a well earned reputation for pushing on whenever he saw an opening—in Pakistan, no doubt, he felt the situation to be different. Too quick a decision, in any field, might only add to the mass of problem, which already existed. Gracey's philosophy, by contrast, was one of instant, almost instinctive, decision. He recognised that the most brilliant decision maker would do well to get 50 per cent of them correct. In the case of 30 per cent or so the issue was as broad as it was long, with the decision mattering little. The 20 per cent or so of wrong judgements would, with luck, fall into the correct category next time. Meanwhile the worst one had done was to create a new situation.

We decided to combine the Chief of Staff's Secretariat with that of the Commander in Chief into a single unit, which I would head as PS(C). Underneath Major Inayat Khan, a good sound staff officer, worked directly to Ross McCay, the Chief of Staff. As a second staff officer in our Secretariat, we acquired Dick Learmonth, who had been working under Robin Ridgway for the Auk. Dick had been a tower of strength in Delhi, and proved as

while Mountbatten remained as a constitutional Governor General.

Experts on the Kashmir dispute, and those well versed in the politics of the sub-continent, will doubtless feel that I have been over simplistic in the way I have presented the political situation as it obtained at the start of 1948. If so, I plead guilty at once; I have tried, however, to indicate merely the main elements of the problem; since this constituted the form in which affairs appeared to me at the time. None of us were experts, least of all me; I quickly learnt though, how defence problems, in times of so-called peace, are inextricably mixed with political considerations. Though soldiers should not be politicians, and are seldom successful when they attempt to be so - General de Gaulle is the exception to prove my rule - some understanding of politics is essential in any military appointment near the top.

In Pakistan, Douglas Gracey was fortunate to inherit as Deputy Chief of Staff, Bill Cawthorn, formerly Director of Military Intelligence in undivided India. Cawthorn was as Australian, a brilliant staff officer with a clear and flexible mind. We positioned him in Karachi. There he provided professional military advice to Iskander Mirza and Liaqat, obtained their instructions and passed these on to us in Rawalpindi. As I have indicated, my boss, Douglas Gracey, found politics difficult, and itched always to be allowed to get on with his main interest and skill; the training of an Army for war. Thus, without anything being said officially, the job of dealing with Bill Cawthorn devolved increasingly on me, young and inexperienced as I was. Ross McCay, Gracey's successor as Chief of Staff, another Australian officer in the Indian Army, wisely kept himself aloof from the political scene. In any event he had such a full time task wrestling with the many administrative difficulties facing the Pakistan Army that he would never have had the time to master the non stop ebb and flow of politico-military topics which beset us throughout my time in Pakistan. Bill Cawthorn was a marvellous teacher; he always assumed that one was more intelligent than I must have often appeared. I owe him much and remain grateful for all he taught me, and for the confidence he placed in me to see that Douglas Gracey was adequately briefed

armoured cars. These officers were so enthusiastic about tanks that one of them, Martel even went to the extent of privately building a one man tank in the absence of official sanction. There was strong resistance to the new ideas from the diehard British cavalry officers who held many senior positions and wielded great influence. Horse cavalry remained on the orders of battle of the British and several other armies for several years.[11]

Fuller visualised a fast moving 'swarm' of, what he described as 'motorised guerrillas', mounted in light vehicles, backed by light tanks moving ahead of and around an advancing tank force to search the areas to the front and the flanks to locate the enemy and picket important places like bridges, crossing places, defiles and other bottlenecks for movement so as to provide safe and unrestricted passage to the tank force. The 'swarm' would fight off similar 'swarms' of light forces employed by the enemy. Having contacted the enemy these 'motorised guerrillas' while maintaining the contact, would thin out to the flanks to allow the tank force to close with the enemy.[12] It will be seen later in this article that Fuller's idea was taken up by the German Army, developed further and given practical shape.

In 1927 an Experimental Armoured Force was formed in the UK to try out the ideas being propounded by the British advocates of the tank. Even though their ideas had not quite crystallised and their thinking in some respects was still somewhat woolly, it was clear that there was a future for tanks and that every tank force would require a reconnaissance element. The reconnaissance component of the Experimental Armoured Force consisted of a company of tankettes and two companies of armoured cars. A light field battery with guns mounted on half tracked lorries, which was designed for attachment to the reconnaissance element formed a part of the artillery component of the Experimental Armoured Force. The reconnaissance element, besides obtaining information by search and observation, could also fight for it.

The tasks conceived for the Experimental Armoured Force were-

(a) strategic reconnaissance in place of the cavalry;

(b) cooperation with the main force;

(c) independent tasks or missions lasting upto 48 hours.

The tasks visualised for the Experimental Armoured Force were virtually identical to those of the cavalry. The Force was built around a battalion of 48 medium tanks. These tanks weighed only around 12 tons, but had a top speed of barely 7 miles per hour which rendered them unsuitable for carrying out strategic reconnaissance by moving ahead of the main force. For this task only

the tankettes and the armoured cars had the requisite mobility. In the second role of cooperation with the main force, which was still considered to be cavalry or infantry, it was visualised that the Experimental Force would be held back and launched at an opportune moment to attack an enemy flank in coordination with the main attack. The third role could mean anything, including having to push ahead to seize an important objective such as a bridge over an obstacle, an important communication centre or a tactical feature and to hold it until the arrival of the main force. Alternatively, it could involve working around the enemy's flank to harass him by attacking his administrative units or headquarters or cutting off his rearward communications. The Force lacked a dismountable element which it required for accomplishing some of the tasks, particularly for holding the places seized by it. Allotment of infantry to the Force required provision of suitable transport to the infantry to enable it to keep up with the tanks. Such troop carrying vehicles did not exist in the British Army at that point of time.

In one of the exercises the Force successfully attacked an advancing enemy force of an infantry division and a cavalry brigade from a flank and inflicted heavy casualties on the enemy. Armour, in particular light armour, was able to successfully demonstrate that it could take over the roles of the cavalry and, in fact, perform them better. The superiority of the light armoured vehicle over the horse was clearly established.

The Experimental Armoured Force was disbanded after the trials in 1928. The trials had brought out some very valuable lessons and demonstrated an entirely new concept of mobile warfare. The ultra conservative British Army failed to develop the ideas further and capitalise on the lead which it had. The Germans, who had been closely watching the developments and digesting the thoughts put forth in the writings of British tank enthusiasts, developed the ideas further into their own concepts and doctrines.[13] They also built up an armoured force which was free from old and hidebound doctrines. This paid them handsome dividends after the outbreak of World War II. The British, who were really the pioneers of tank warfare had to relearn from the Germans after paying heavily for their neglect.

The roles visualised for armoured forces by the British thinkers after World War I were essentially those which later came to be associated with light armour. British efforts during the 1920s were essentially directed towards developing light weight tanks carrying only sufficient armour to provide protection to the crew against small arms and machine guns firing armour piercing ammunition. It was believed that such light tanks would get into enemy rear areas and play havoc there. This also led to the thinking that a tank only needs to be armed with one or more machine guns which were considered

in practice it operated surprisingly well. The main credit for avoiding a major conflagration over Kashmir must go to the two Prime Ministers concerned, Nehru and Liaqat, who despite their differences, remained determined throughout to avoid full scale war between India and Pakistan. It helped too, that on 22nd December, the Indian Government, accepting a suggestion made ten days earlier by Mountbatten, decided to appeal to the United Nations Organisation. The Indian complaint, accusing Pakistan of having organised the original aggression by the raiders, and of continuing to support them, induced a degree of restraint on both sides within Kashmir itself. Furthermore the Indian commander in Kashmir, Kalwant Singh, finding his superiority in man and weapon power largely offset by the weather and the terrain, wisely pursued a policy of limited further involvement. From our point of view in Pindi, India's referral of the problem to the U.N. meant that there was now less danger of a full scale war between India and Pakistan. Army H.Q. involvement in the defence of the key areas of Kashmir thus became more overt, with Sher Khan, the extremely able Director of Military Operations, starting to give more specific direction to the Azad Kashmir Forces.

Messervy, understandably, in view of his basic approach to the role of a British Commander in Chief in an independent Pakistan, was not prepared to soldier on, in the equivocal situation over Kashmir, I have described. Douglas Gracey, more pragmatic, if sometimes naive in his understanding of politics, had fewer reservations; he operated a compromise by which he quietly released, normally without question, to General Tariq such resources as the latter needed to maintain a defensive role. Gracey, however, retained overall control of the Army, and, in particular, for planning the defence of the country should India, overcome by frustration over Kashmir, launch an attack into the West Punjab. Though there was still a British Commander in Chief in Delhi until the end of 1948, Roy Bucher's operational responsibility was far less than Gracey's in Pakistan. Moreover, in India, as opposed to Pakistan, there were already enough senior officers, sufficiently well trained and experienced to do without British support if necessary. We therefore had to reckon with the possibility of a surprise attack by India, unlikely though this might seem, certainly

in the U.K. Gracey, realising the implications of complying with Jinnah's order, replied that he was not prepared to issue any such instructions without the approval of Auchinleck, the Supreme Commander. He then, with great difficulty, got through to the Auk in Delhi, and persuaded him to fly to Lahore, where Jinnah was staying with Mudie, the provincial Governor, to explain the consequences of executing his order. Auchinleck arrived in Lahore on the morning of 27th October; he told Jinnah that to send Pakistan troops into Kashmir, now that the State had acceded to India, would constitute an act of invasion. In such circumstances, he, the Supreme Commander, would have no option but to order automatically and immediately the withdrawal of every British officer serving with the Pakistan Army. Since such action would have made it quite impossible to reform and reorganise the Pakistan Army, which depended to a far greater extent than the Indian; on retaining the services of British officers, Jinnah, reluctantly accepted the Supreme Commander's decision, and cancelled his order.

It remained, however, vital for Pakistan somehow to defend the mainly Muslim areas of Kashmir outside the vale itself. A fiction, therefore, arose by which this territory became the responsibility of a local militia, known as the Azad (Free) Kashmir Forces, commanded by a regular Pakistani officer, who used the 'nom de guerre' of General Tariq.* Elements of the Pakistan Army found their clandestine way into the Azad Kashmir Forces in sufficient numbers to stabilise the military situation. British officers were strictly prohibited from taking part in these operations, and were not permitted to enter Kashmir. Both Messervy and Gracey were aware of the progressive reinforcement of the Azad Kashmir forces from the regular Pakistan Army. Neither, however, gave any instructions or advice to General Tariq, who dealt directly with Iskander Mirza, the Defence Secretary, and through him with Liaqat Ali Khan, the Prime Minister who also held the Defence portfolio.

Though this covert involvement of the Pakistan Army in Kashmir, byzantine in its complexity, was clearly not satisfactory,

*Real name Colonel Mohamad Akbar Khan DSO.

more effective against infantry and other soft targets likely to be encountered in the rear areas; than a heavier calibre direct firing gun. Heavier tanks were not considered necessary, at least during the early stages of a war. In Britain only one experimental model was built which was fitted with a 3 pounder gun in the main turret and had four machine guns, each in its own independent turret. A medium tank (Vickers Mark II) mounting a three pounder gun in the main turret and two machine guns, again each in its separate auxiliary turret, was built. This tank weighing 12 tons had a very poor top speed.[14] A slightly heavier tank, designated close support tank, was also built. It was meant to accompany and support the light tanks. It could carry a howitzer or a mortar and had a tube for launching smoke bombs. The main armour weapon or the main battle tank of the time was the light tank and units equipped with it were given roles identical to those of the cavalry.

WORLD WAR II

The German Army, which had initially borrowed the armour concept from the British, showed the way to the rest of the world after the outbreak of World War II, particularly in France in 1940; where the numerically superior Anglo-French armoured forces were completely overwhelmed by the German Panzer forces. The German Army employed motor cycle mounted reconnaissance battalions backed up by light tanks and armoured cars to lead their panzer divisions. The motor cycle battalions moved forward rapidly and swarmed around the enemy forces, covering all routes of ingress and exit. If the enemy moved the motor cyclists also moved keeping the enemy boxed in until the German tanks came up to deal with the enemy force. Often Allied troops gave up their positions and pulled out when the German reconnaissance units engaged suspected areas with speculative fire. This German practice evidently was the practical application of the idea of employing 'swarms' of 'motorised guerrillas' ahead of armoured forces put forth by Fuller. This did not work in North Africa and later in Russia possibly due to the paucity of roads and tracks and the inability of motor cycles with side cars to move across country in difficult terrain.[15]

The US Army had converted its cavalry regiments into light armour. The former US cavalry regiments were redesignated armoured cavalry regiments. An armoured cavalry regiment in the US Army is a brigade sized organisation, its squadrons being the equivalent of our regiments, its troops corresponding to our sqadrons and platoons to our troops. An armoured cavalry regiment is allotted to each US corps and every armoured division in the US Army has an organic armoured cavalry squadron. The US Army also has an organisation for a cavalry division which in fact is a light armoured division. The US Army evidently considers reconnaissance a more important military activity than

many of the other armies. General George S Patton, one of the great exponents of armoured warfare in World War II, called reconnaissance troops the 'eyes and ears of a commander'. He urged that once reconnaissance troops gained contact with the enemy they must never lose it and report everything that they see (or do not see). He considered that light armour used at night induced the enemy to open fire and disclose his position.[17]

By World War II British Cavalry regiments had mostly been converted into reconnaissance regiments equipped with armoured cars or light tank regiments which were employed in conjunction with armoured regiments mounted in heavier cruiser tanks. After the entry of Italy in the War on Germany's side in 1940 the British faced a threat in Africa from the numerically vastly superior Italian and Italian Colonial forces in that continent. The Suez Canal, a life line for the British for communications with countries of her Empire in the East, was threatened together with some of the British colonies in East Africa. After the fall of France, Germany was in a position to spare forces to reinforce her Italian ally in Africa if needed. To counter the Italian threat the British had a small force in Egypt, which included 7 Armoured Division. While the British armour in France had been badly mauled, the small British armoured force in Egypt was able to show its mettle by a series of small offensive actions against Marshal Graziani's Italian forces which had moved up against the British troops guarding the western frontier of Egypt. The armour complement of 7 Armoured Division consisted of 11 Hussars, its reconnaissance regiment, equipped with armoured cars, two light tank regiments equipped with US supplied Stuart light tanks and two regiments equipped with heavier cruiser tanks. General Wavell, the British Commander-in-Chief, had a very large area to protect and a small force to do it with. He decided to adopt an offensive posture, but without mounting any major offensive operation as he considered that such a posture would deter the Italians from launching an offensive and yet not provoke a German reaction. 11 Hussars moved up to the border and started a series of small actions like making gaps in the Italian barbed wire fencing along the border, getting in behind some of the Italian out posts, ambushing Italian convoys and taking prisoners and even attacking some lightly held positions. One of the light tank regiments, 7 Hussars later relieved by 8 Hussars, backed up by cruiser tanks of 1 and 6 Royal Tank Regiments also undertook some operations, including an attack on Fort Capuzzo. Later when the Italians moved forward cautiously with five divisions, the small armoured force operating as covering troops inflicted considerable damage on them in the course of a number of rear guard actions. Later, when the Italian troops halted at Sidi Barani and set up a series of fortified camps, mobile patrols of 11 Hussars penetrated in between them. In the course of these actions the regiment obtained information which was to prove invaluable during later operations. These actions of British light armour have been described

Even more importantly, the invasion by the tribesmen forced the dithering Maharaja off his fence of indecision, and on 24th October,* unnerved by the rush of events, he signed a letter of accession to India. The Government of India accepted Kashmir's accession, and the Ruler left Srinagar, accompanied by his wife and son. Next day an Indian infantry battalion was flown in to the airfield at Srinagar, and, advancing to Uri, managed with difficulty, to hold the tribesmen there, though they suffered considerable casualties including the loss of their Commanding Officer. Secure in the possession of Srinagar airfield, the Indians steadily built up their forces in Kashmir, while the tribesmen, quite incapable of matching the regular troops of the Indian Army in positional warfare, soon began to disintegrate and return whence they came.

Jinnah, whose exact responsibility* for launching the tribal invasion will probably never be known, now faced an appalling dilemma. As Governor General of Pakistan, he could not afford to see Kashmir, now that it had legally acceded to India, simply occupied by the Indian Army. Opinion inside Pakistan would never accept the subjugation of their co-religionists without any attempt being made to help them. The result would inevitably be a resurgence of communal violence within Pakistan, quickly spreading across the border to affect the far more vulnerable Muslim community still in India. Furthermore the mainly Muslim area of Kashmir, with Poonch as its centre, contained the headwaters of the rivers running into the West Punjab, Pakistan's main agricultural province, and which was greatly dependent on irrigation for its prosperity. Jinnah realised that he had to do something, and gave orders through the Defence Ministry in Karachi for regular Pakistan troops to be moved into Kashmir. The order reached Douglas Gracey@ on 26th October in Rawalpindi, where he was acting Commander in Chief in the temporary absence of Frank Messervy

*RL Batra, the Deputy Prime Minister of J and K flew on October 24 to Delhi with the Instrument of Accession signed by the Maharaja. However, the accession was accepted only on 25 October as explained in number two TRUTH in the introduction[7].

*Sir George Cunningham the Governor of NWFP has this entry in his Diary on 26 October 1947–'Apparently Jinnah himself first heard of what was going on about 15 days ago, but said "Don't tell me anything about it. My conscience must be clear"'[8].

@Jinnah also asked Mudie the Governor of Punjab to pass this order to Douglas Gracey from Lahore. There was some heated exchange on telephone when Gracey did not agree[9].

complaining that Pakistan was not only failing to provide supplies of essential commodities, but also sponsoring border raids into Kashmir in support of the local risings against the Ruler. The main factor in the crisis was, of course, the indecision of the Ruler, whose procrastination proved disastrous to himself as well as to the luckless people of his State. Finally, using the example of Junagadh to provide justification for their behaviour, the Pakistanis took the law into their own hands and connived at a large scale invasion of Kashmir by tribesmen from the North West Frontier Province.

I was not in Pakistan at the time this invasion was launched, being still at Dehradun and busy with implementing Operation Exodus. Even if I had been I doubt if I would have known precisely how the operation was organised, or who decided that it should go ahead. Certainly no-one at Army H.Q. was consulted; Terence Glancy told me that neither Frank Messervy nor Douglas Gracey had any inkling of what was intended. I cannot believe either that the Governor of the North West Frontier Province, Sir George Cunningham, was given previous warning. Rumour subsequently maintained that the operation originated on a political level through officials of the Muslim League,@ and that such military planning as took place was the responsibility of former Muslim officers in the I.N.A. (Indian National Army) who had settled in Pakistan.

Whoever was responsible for organising the invasion of the tribesmen, it proved a disasterous decision, from both a military and a political point of view. The tribesmen were totally without discipline, and interested only in looting. The obvious military objective for anyone attempting to invade Kashmir from the north west was the airfield at the capital, Srinagar. With the airfield in the hands of the invaders, no help from outside could have arrived in time to save the valley of Kashmir from being occupied and its Muslim community freed to opt for Pakistan. Instead the raiders delayed on the route, pausing at Baramullah to sack a nunnery, and their numbers progressively decreased as pillaging individuals departed back home to the tribal areas with their booty.

@See the Introduction : number TWO-truth

as 'armoured guerrilla warfare'. Wavell in his despatches wrote of 11 Hussars ".... was continuously in the front line, and usually behind that of the enemy, during the whole period!" Of the light tank regiments he said, "The light tank regiments, first the 7 Hussars, later relieved by 8 Hussars, showed similar eagerness to take opportunities and the skill to make most of them."[18] 11 Hussars was commanded by the redoubtable Lt Col JFB Combe, who was to later earn distinction as the Commander of 'Combe Force' which after a gruelling cross country move over extremely difficult ground outflanked the withdrawing Italians and set up a block at Beda Fomm South of Benghazi on the Italian axis of withdrawal, an action which has earned a place in military history as a 'classic' amongst operations of this type.[19]

A role for light armour which emerged nearer home during World War II was support of infantry in difficult terrain where heavier tanks could not operate or where they could not be taken. During the fighting in and around the Imphal plain when the Japanese attempted to establish themselves on the crest line of Naga Hills in North Eastern India, 7 Cavalry, equipped with Stuart light tanks formed a part of 254 Indian Tank Brigade which was located in the area. The Regiment played an important part in the operations which followed the Japanese incursion and made substantial contribution to the success of XXXIII corps in throwing the Japanese out of India. 7 Cavalry was the first regiment of the Indian Armoured Corps to go to war mounted in tanks. The Regiment operated in exceedingly difficult terrain where on occasions tanks had to be winched up by D-8 tractors as the slopes were too steep for them to climb under their own power. Stuart tanks of 45 Cavalry, later relieved by armoured cars of 11 PAVO cavalry kept the Corps maintenance route from Dimapur onwards open by constant patrolling.[20]

45 Cavalry after its relief by 11 PAVO Cavalry became a part of 50 Indian Tank Brigade in Arakan where it operated in support of infantry. During the reconquest of Burma, besides 7 cavalry, three other Indian light armoured regiments, viz 16 cavalry, 11 PAVO cavalry and 8 cavalry performed a variety of tasks like reconnaissance, flank protection, establishment of blocks, clearing and patrolling of routes and support of infantry. The variety of roles which light armoured regiments were able to perform over different ground conditions illustrates the versatility of these units.[21]

Post Independence Operations in India

During the Kashmir Operations in 1948-49 two light armoured regiments, 7 Cavalry and CIH operated in Jammu and Kashmir, mostly in support of infantry in areas in which heavier tanks could not operate or where they could not be taken. History was made by 7 Cavalry when it took some of its tanks

up to Zoji La and participated in an attack in support of infantry to overrun enemy positions which the infantry had failed to dislodge in earlier attempts. The Battle of Zoji La, which was fought at an altitude of over 12,000 feet, established a high altitude record for tank operations. This once again demonstrated the utility of light armour in difficult terrain.

Later, during the Chinese aggression in 1962, a squadron of 63 cavalry equipped with armoured cars and a squadron of AMX-13 light tanks from 20 Lancers were air lifted into Ladakh. At that time the Indian Air Force did not have transport aircraft capable of lifting anything heavier.

1965 Indo-Pakistan War

During the 1965 Indo-Pakistan War, I Corps had launched 1 Armoured Division into Pakistan territory in the Sialkot sector with the task of securing the line of the Ravi-Marala Link Canal. The Division advanced with 1 Armoured Brigade in the lead. The Division had no light armour available for employment as mobile troops for reconnaissance or flank protection. A squadron of one of its armoured regiments, 62 Cavalry (equipped with Sherman tanks), was employed by the division to guard the Eastern flank. When the advance started on 8 September, 1 Armoured Brigade was moving two regiments up with 17 Horse on the left and 16 Cavalry on the right. Besides engaging the enemy there were some instances of tanks of the regiments of the Brigade and the flank guard engaging each other with 'friendly fire'. In one instance a medium battery of the Divisional Artillery also became the target of 'friendly fire' from one of the armoured regiments. In each case the regiment which fired as well as the one which was the target reported each other as enemy. This caused the tally of enemy armoured regiments at formation headquarters to add up to a formidable figure. Furthermore, 16 Cavalry got involved with some enemy tanks deployed in broken ground which it could not deal with by manoeuvre due to the nature of the ground. Owing to the non-availability of accurate maps and lack of reconnaissance no worthwhile topographical information was available in advance. On the left 17 Horse had been moving well and dealing effectively with the enemy encountered by it. If the advance by 17 Horse had been allowed to continue in all probability the enemy tanks opposing 16 Cavalry would have had to pull out. In the worst case 4 Horse, which was held in reserve, could have been used to outmanoeuvre them. In the event, however, commander 1 Armoured Brigade, perhaps due to the confused picture available to him and the exaggerated reports of enemy armour strength, took the unfortunate decision to halt the advance and withdraw his regiments into a defensive box in which the Brigade remained for the next forty eight hours before resuming advance on a different axis. With this decision there was no question of the Division ever reaching its original objective as the enemy had

to appoint Douglas Gracey to succeed Messervy as C in C. Frank Messervy asked me if I intended to stay on with Douglas Gracey as his Private Secretary in these new circumstances. Though doing so would involve me being prompted, only temporarily of course, to the rank of Lieutenant Colonel at the age of 26, he (Frank) advised me not to do so. I would get involved in the complexities of the Kashmir problem, and he doubted if to do so would be in the best interests of my career. I listened politely, and thanked him for taking so much interest in my affairs. I did not, however, take his advice, and have never since regretted my decision; the next fifteen months were to be an education in politico-military situations, and the experience I gained then has stood me in good stead on many occasions since.

The transfer of power on 15th August 1947 had allowed the various States to opt for either India or Pakistan, and, after a triumph of persuasiveness by Mountbatten in the Chamber of Princes, almost all had effectively done so on sensible geographical or economic grounds, regardless of whether the Ruler was Hindu, Sikh, or Muslim. The two significant exceptions were Kashmir and Hyderabad, both of which felt themselves sufficiently large and powerful to sign standstill agreements with India and Pakistan, hoping by so doing to retain a large measure of their former status. A third, Junagadh, a small Kathiawar state of 700,000 Hindu inhabitants, but with a Muslim ruler, perversely opted for Pakistan, and by doing so caused a challenge to the whole accession concept. The details of the Junagadh issue need not concern us. Everyone recognised the absurdity of the situation, and the Pakistanis, though affecting to be mortally affronted, did not object too seriously when the Indians determined to take Junagadh into India by force. Kashmir, however, was on a very different scale. The Ruler's refusal to accede to either India or Pakistan before the transfer of power led to a major crisis, and the affair still bedevils the whole position between India and Pakistan as I write. Soon after 15th August, the Muslim majority in Kashmir began a series of risings against the Hindu ruler; by early September the position in the State was not only uncertain but had become dangerously unstable. Throughout September the uncertainty continued, the Kashmir Government

mixing castor oil in refreshments he served to them is omitted).

Above Douglas Gracey was Frank Messervy, whom Pakistan had to some extent inherited as C in C, since at the time of partition he was GOC-in-C Northern Command with his H.Q. already in Pindi. He had a well deserved reputation for gallantry as a fighting commander having first come to notice as a dashing Commander of a mobile column, Gazelle Force, in the successful campaign in 1941 to liberate Abyssinia. Subsequently he had commanded both 4th Indian Division and 7th Armoured Division in the Western Desert. While holding the latter command, his Headquarters was overrun by the Africa Corps and he himself captured in the early stages of Rommel's May 1942 offensive. Messervy removed his badges of rank, and, masquerading as an elderly private soldier, escaped three days later to rejoin Eighth Army. With the arrival of Montgomery, command opportunities for people from the Indian Army swiftly disappeared; Messervy returned to India, commanded 7th Indian Division in the Arakan, where his H.Q. was again surrounded, and subsequently a Corps in XIVth Army's pursuit southwards towards Rangoon. Messervy was an Etonian, an Indian Cavalry soldier, a polo player, and something of a traditionalist. I think he found it hard to accept that if one served an independent Pakistan, this meant carrying out the policy of that country's Government, whatever one's views about its wisdom or effects on the defence of the sub-continent as a whole. I found his personality impressive and he certainly possessed a considerable presence. Douglas Gracey and he, however, were poles apart temperamentally, and it was no real surprise when early in January 1948 Messervy announced that he would be leaving Pakistan on retirement in a month's time. Many Pakistani officers were sad at first to see him go, especially those in the Cavalry whom he knew well and who liked his approach to soldiering. But I doubt if Messervy was sufficiently flexible to have coped with the politico-military situation, which had developed as a result of the Kashmir problem, with whose origins I must now deal since for the rest of 1948, and indeed the remainder of my time in Pakistan, it was to dominate our affairs. Before he left, Frank Messervy kindly invited me up to his house for a drink. By this time, the Pakistan Government had decided

been given ample breathing space to reinforce and redeploy his forces. Thereafter, for the remainder of the war, 1 Armoured Division occupied itself with encircling and attacking one village after another, some even more than once. While the units performed the tasks given to them with distinction and elan, the achievements at formation level were negligible.[22]

The confusion on the first day of the operation, leading to the decision of the Brigade Commander to halt the advance was, to a large extent, attributable to lack of information which an armoured formation commander must have in order to take sound and timely decisions. In armour operations the decision has to be the right one as in fast moving situations there is rarely a second chance available. If a reconnaissance regiment had been available to 1 Armoured Division and employed for medium reconnaissance and the correct tactical and topographical information available, the story could well have been different. Lt Gen KK Singh, who was commander 1 Armoured Brigade at the time writes, "If the 1 Armoured Division had been allotted a Recce unit on its ORBAT, the infructuous deployment of 8 September would well have been obviated."[23]

1971 Indo-Pakistan War

In defensive situations covering troops are deployed out in front ahead of the defensive positions to prevent the enemy from contacting them before they are ready. This task is, in a way, the opposite of reconnaissance, in that the aim is to keep the enemy's reconnaissance troops away from the positions under preparation and so prevent them from gaining information. In the process information regarding the enemy's activities is gained. During the 1971 Indo-Pakistan War, Pakistan Army had deployed covering troops consisting of a reconnaissance regiment, a regiment of tank destroyers (self-propelled anti-tank guns), and a reconnaissance and support battalion in the Shakargarh Bulge facing North. This small force was able to delay the advance of I Corps by occupying successive covering positions based on minefields. I Corps operating in this Sector started its advance on 5 December. The first contact with the Pakistani defensive position based on the Supwal Ditch and the Basantar Nullah was made eight days later on 13 December. I Corps covered a distance of about ten miles during this period achieving a rate of advance of a little over a mile a day against light opposition, a remarkable achievement for the Pakistani covering troops. The availability of a reconnaissance regiment with the Corps would have resulted in speedier advance by eliminating the need for the leading formation to deploy on contacting each delaying position. The lack of reconnaissance resources with the Corps also resulted in some non-existent enemy positions being attacked and minefields which contained no mines being laboriously cleared.[24] Apart from being unnecessarily time consuming,

attacks on positions not held by the enemy are rather disconcerting for the participating troops. Such a 'farzi' attack in war is rather akin to a Wodehousian situation in which while coming down a ladder in darkness a person puts his foot down very carefully on a non-existent rung with rather comic and, possibly, painful results!

The Gulf War 1991

Closer to present times, during the ground offensive of the Gulf War light armour was extensively used by the Coalition Forces. The Two US Corps, XVII Airborne Corps and VII Corps pushed out their respective armoured cavalry regiments in the lead for medium reconnaissance. In VII Corps which consisted of armoured divisions only, viz 1 US Armoured Division, 3 US Armoured Division and 1 British Armoured Division, each armoured division was led by light armour, the two US divisions by their respective armoured cavalry squadrons and the British division by its organic reconnaissance regiment. The Western flank of the Coalition Forces was guarded by 6 French Light Armoured Division. 1 US Cavalry Division strengthened by a brigade from 2 US Armoured Division, operated along Wadi Al Batin on the right of VII US Corps to carry out a feint to lead the Iraqi forces to believe that the main coalition thrust was coming along Wadi Al Batin. At the same time 1 US Cavalry Division ensured that there was no gap between the Coalition Forces operating to the west of Wadi Al Batin and those in the Kuwaiti territory to its East. A feature of light armour operations during the Gulf War was the close integration of light armour and army aviation. While US armoured cavalry units have an element of main battle tank equipped sub units, the British reconnaissance regiment was equipped with Scorpion light tanks mounting 76 mm medium velocity main armament relying on chemical energy armour defeating ammunition which has limitations against modern composite armour. As soon as the reconnaissance regiment contacted Iraqi armour; armed helicopters of the Divisional Army Air Corps Squadron came forward to take on Iraqi tanks beyond the range of 76 mm guns of the Scorpions.

The Gulf War, the conduct of which on the Coalition side was based on the US Airland Battle doctrine, amongst other things demonstrated that light armour forms a vital component of modern mechanised forces.[25]

Light Armour in the Indian Army

India has 55 armoured regiments,[26] which is a substantial force of armour, larger than the German panzer forces in 1940, but it has no light armour. The absence of light armour raises certain questions. In the event of a war, will the Indian armoured forces, once again, go blindfolded into battle? How will the

West Punjab, the largest province in the country, and the most important from any Army standpoint. Poor Mirza had only limited authority, since Pakistan, as a new country, had as yet very few funds. In theory, India was supposed to make over an agreed percentage of the old Government of India funds; these, thanks to the sterling balances accrued from the British Government during the war, were not inconsiderable. Delhi, however, dragged its feet over the financial transfer, partly because of bureaucratic inertia, but increasingly as a means of putting pressure on the Pakistan Government. Poor Mirza had an impossible task; on the one hand he was assailed every morning with requests for financial approval of projects all of which were essential to the Army's well being. On the other, Ghulam Mohamed, the Finance Minister, and Mohamed Ali, the Secretary General, down in Karachi kept telling him to avoid as much expenditure as he could until, from whatever source, they could arrange some sort of basis for funding Pakistan's expenditure. I felt for Mirza, and quickly became friends with him; sometimes, too, I could ease matters by putting requests into an acceptable order of priority; Douglas Gracey, as Chief of Staff, was far too busy and indeed too dynamic to bother with such detail. He soon became happy for Mirza and I between us to negotiate some sort of solution between Karachi and the hungry Principal Staff Officers at Army H.Q.

To add to our difficulties, Naval and Air H.Q. were sited away from the Army alongside the embryo Ministry of Defence in Karachi. Joint planning at first was virtually non-existent, and there was an understandable tendency for the Army to think that the Pakistan Navy and Air Force got preferential treatment in all important financial matters because of their proximity to the source of supply. The Defence Secretary, Iskander Mirza, did his best to referee the situation, and I soon learnt to respect his ability to get things done, even if his method did not always stand up to close analysis. Iskander was, in fact, a master at playing both ends against the middle, a technique he had acquired early in his career as Political Agent in the North West Frontier Province. (A story about how he dispersed a large political procession of Pathans marching to Peshawar in support of Frontier Gandhi by

Enormous opportunities are knocking at our doors for moving to an era of peace and plenty for all by being a part of the historic surge towards *unity of man, global economy and earth citizenship.* I hope this Chapter from Sir James' Memoirs will help us understand the TRUTH and work for reconciliation with honesty, conviction and love. India which is almost eight times larger in size, population and GDP must take unilateral initiatives to promote people to people contact. It would help if we keep in mind the TRUTH recorded in the Time Magazine of December 23, 1996 : On his death bed, according to his Doctor, Mohammed Ali Jinnah, the wealthy lawyer of Bombay, rendered his final judgement on his signal achievement :

"Pakistan", he said, has been "the biggest blunder of my life".

Where necessary I have added footnotes to give a fuller picture of events. We can now read the account of Sir James after he was posted to GHQ at Rawalpindi in November 1947.

CHAPTER ELEVEN : PART ONE

Though this was the first time I had worked in a large H.Q., I settled into the routine surprisingly easily. As M.A. (Military Assistant) to the Chief of Staff for the first two months, I was lucky to be at the hub of events and Douglas Gracey was the sort of boss who liked things done quickly, besides being an excellent delegator. Terence Glancy introduced me to his own routine, which so obviously worked well that I merely had to slip into the groove he had created. The day began early at 8 a.m. with the Chief of Staff's morning meeting, attended by the Principal Staff officers and the Joint Financial Adviser only. In November, when I arrived, these were all British, highly professional staff officers from the Indian Army, with the exception of the Financial Adviser, Mumtaz Mirza, who, in the prevailing economic climate, had a difficult and unenviable job. At this time, Pakistan's administrative capital was down in Karachi, the commercial centre of the new country. Karachi was also the capital of Sind province, a difficult province in itself, and with interests often different from those of

flanks be guarded? In defensive situations what will the covering troops be composed of? Who will fill the gaps between formations, particularly in open desert areas? In retrograde movement should it become necessary, who will cover the withdrawal and provide rear guards, etc, etc. In the absence of light armour there is only one answer, ie armoured regiments. Besides their not being entirely suitable for the roles of light armour, employment of armoured regiments in this manner is uneconomical and leads to dispersion of armour, in the employment of which concentration is a cardinal principle.[27] Without availability of light armour it will not be possible to fully exploit India's sizeable armoured strength. It is indeed unfortunate that lessons from military history and our own experiences in 1965 and 1971 have been forgotten.

Light armoured regiments faded away from the order of battle of the Army primarily due to the non-induction of new equipment to replace Stuart tanks and armoured cars which could no longer be kept going after more than a quarter of a century of service. There was a one time induction of a limited number of AMX-13 light tanks which were not employed in their proper role, but misemployed as self-propelled anti-tank guns. The specifications of a light armoured fighting vehicle to replace Stuarts and armoured cars were debated for a considerable time, but the then armour hierarchy insisted that it must be a light tank, and not an armoured car, which must have fire power equivalent to the main battle tank, sufficient armour protection to enable it to fight against enemy main battle tanks, be amphibious and yet be small and inconspicuous. A tank meeting all these requirements is a physical impossibility. There was a time when the Swedish IKV-90 was under consideration. The IKV-90 was not meant to function as a light tank in reconnaissance and other roles of light armour. It was designed to operate in place of a main battle tank in the soft and difficult going as obtaining in Northern regions of the Scandinavian Isthmus. What is really needed for operating as a light armoured reconnaissance vehicle is a small and inconspicuous vehicle with a main armament capable of successfully engaging similar enemy vehicles with armour protection for the crew against heavy machine gun (.50 inch or equivalent calibres) armour piercing fire and mobility superior to that of the main battle tanks in service. Amphibious capability is not necessary. Attempting offensive operations across the grain of the country involving repeated crossing of water obstacles is unsound. In any case putting reconnaissance elements across a water obstacle which is unfordable or otherwise not crossable by the main force without rafting or bridging would make no sense. In addition, to enable the vehicle to engage main battle tanks when necessary, it should be equipped with externally mounted, but fired from within, anti-tank guided missiles. The vehicle should be tracked, but wheeled armoured cars cannot be entirely ruled out as they offer several advantages. They are less noisy and more suitable for silent reconnaissance, they are cheaper to procure and maintain and have longer

endurance. Even the armoured cars of World War II vintage were able to operate over several types of terrain such as cultivated rolling country of the European Continent, sandy deserts of North Africa, hill roads and tracks of North Eastern India and Burma and the scrub country of Central Burma. Wheeled armoured cars have gone through a great deal of development since then and their performance now is far superior to that of their Second World War ancestors. The cross country performance of modern state of art wheeled armoured cars comes fairly close to that of tracked vehicles. Perhaps the answer is to have a mix of regiments equipped with tracked and wheeled armoured reconnaissance vehicles and allot wheeled or tracked regiments to formations depending upon their areas of operation.

While the British Army uses the Alvis Scorpion light tank mounting a 76 mm main gun which relies upon chemical energy ammunition for defeating armour, the US Army employs a variant of the Bradley infantry combat vehicle as the basic reconnaissance vehicle. Both vehicles have coaxial and commanders' dual purpose machine guns. They also carry externally mounted anti-tank guided missiles which can be fired from within the vehicles.

A possible answer for India could be a variant of the indigenously manufactured BMP II infantry combat vehicle to serve as a tracked armoured reconnaissance vehicle. It would require increase in armour protection which can be at the cost of loss of amphibious capability: If up armouring has a material effect on the mobility of the vehicle it may need repowering. A suitable armoured car will have to be developed or procured.

The reintroduction of light armour in the Army will strengthen the case for transfer of armed helicopters from the Air Force to the Army Aviation Corps. A helicopter has to be regarded not so much as an aircraft, but more as an extremely flexible and versatile vehicle possessing a degree of mobility unmatched by any ground vehicle which enables it to move over all types of terrain. Armed helicopters are really ground weapon systems which in addition to a very high degree of mobility have the capability to elevate themselves in order to engage targets which cannot be engaged from the ground level due to limitations of inter visibility. Their prime function is destruction of enemy armour by operating closely integrated with armoured or light armoured units and sub-units. They operate close to the ground, using the cover provided by vegetation, folds in the ground and man made objects like buildings for movement and taking up positions for engaging the enemy. This is not very different to the tactics employed by armour. Apart from their ability to 'see' and 'use' the ground in the same manner as armour commanders, armed helicopter pilots have to relate their movements and actions to the tactics used by the armoured unit or sub-unit with which they are operating. This makes

proxy war launched by Pakistan in Kashmir since 1989 something with which India can live and argue for paying back Pakistan in the same coin. This approach unfortunately, will only retard the development of this region as a whole.

With the above history of 50 years, the two countries are locked in an automatic spiral of action - reaction and the tempo of covert violence and terrorism is gathering momentum. The stand of the two countries on Jammu and Kashmir which has become the symbol of this hostility is :

India : Jammu and Kashmir is an integral part of India. The only unfinished business is to persuade Pakistan to vacate Pakistan Occupied Kashmir.

Pakistan : Majority of the people of J and K are Muslims. They should have the right of self determination by a plebiscite to choose between India and Pakistan.

After eleven years of efforts for India - Pakistan reconciliation, we have come to the conclusion that the establishments in the two countries cannot end hostility. The fate of Nehru - Liaqat Agreement and Simla Agreement also suggests that even signed agreements are worth nothing in any case.

The only way attitudes can change is by people to people contact with a focus on the TRUTH of our problems. Absence of open, sincere and truthful communication is the cause of all fractured relations in families, institutions as well as in and among nations. Fortunately, there is a strong undercurrent of love and affection among people of the two countries. Perhaps it is due to centuries old deep roots in the geography of this whole region. Even among the establishments of the two countries there are large, though silent, sections who realise that hostility is essentially promoted by those who have a vested interest in perpetuating it - intelligence services, traders who handle business between the two countries via third countries and make huge profits, certain sections of clergies and of course a category of the military elite in the two countries.

pared was an 'open' secret. But Delhi refused to face the TRUTH and take action to prevent it.

Eight : In 1971 East Pakistan errupted. India exploited the situation and launched what is frequently called Operation Gibraltar (Indian model). This was by supporting Mukti Bahini (The liberation army formed by the Bengali elements of Pakistan military). In December 1971, a full fledged war broke out resulting in the birth of Bangladesh. The Simla Agreement ended that war. The clause in this agreement dealing with the problem in J and K reads as under:

> "In Jammu and Kashmir the line of control resulting from cease-fire on 17 December 1971 shall be respected by both sides *without prejudice to the recognised position of either side.*@ Neither side shall seek to alter it unilaterally, irrespective of mutual differences and legal interpretations. Both sides undertake to refrain from threats or use of force in violation of this line."

Nine : Manufacturing threats is a fine art mastered by most militaries of the world. Pakistan military has convinced the Pakistani establishment that India would capture large portions of Pakistan unless 7 percent (plus/minus of the GDP; which is around 35 to 39 percent of the federal budget) is allocated for Defence. The fact that India did not annex any portion of East Pakistan does not dissuade them from conviction in this UNTRUTH. Bulk of this allocation (over 70 percent of it) is spent on manpower related costs as Pakistan has acquired the most expensive manning system among the large countries of the world. Indians are not far behind even though for Defence they spend only 3 percent (plus/minus) of their GDP which is nearly eight times larger than that of Pakistan. Many Indian strategists see in this situation an excellent arrangement to drive Pakistan to bankruptcy like the USSR which broke-up by over spending on Defence to match the USA which had five times larger GDP. These Indians see the

@The underlined portion (italics in the above article) was inserted at the last minute when Bhutto undertook to convert the line of control into a permanent border by integrating Pakistan Occupied Kashmir into Pakistan. The TRUTH is that he did not do so.

it necessary that armed helicopter crews thoroughly understand armour tactics from the lowest sub-unit upwards. Armed helicopters must, communication-wise, operate on the command radio nets of the armoured formation or unit with which they are operating and their crews must understand and speak the same radio language. The term armour, in this context is used in a wider sense and refers not only to tanks, but also to mechanised infantry and supporting arms like artillery and engineers. Ideally armed helicopters should form a part of such a combat group. A light armoured regiment can be looked upon as a combat group. Armed helicopters belonging to the Air Force, flown by Air Force crews can hardly be expected to operate integrated in the manner described.

The organisation of the erstwhile light armoured regiment was, in principle, sound. Besides light armoured vehicles, it included dismountable elements carried in armoured vehicles at the squadron level and supporting elements like mortars and pioneers at the regimental level. These will necessarily have to be modernised, in that the rifle troops will use infantry combat vehicles, the mortars fitted, in suitable armoured vehicles from which they can fire without dismounting and the pioneers provided with a modified version of the infantry combat vehicle. Furthermore, in keeping with current developments surveillance devices such as ground surveillance radar, long range night observation equipment and remotely piloted vehicles (RPVs) carrying photographic/television cameras should be integrated to enhance the regiment's information gathering capability.

CONCLUSION

Reconnaissance troops have, from times immemorial, been vital components of armies. Earlier this function was performed by horsed cavalry, but after a small beginning made in the First World War during the Palestine Campaign in using armoured cars and light patrol cars for reconnaissance, light armour gradually replaced horsed cavalry for reconnaissance and all its other roles. Reconnaissance units have been described as the eyes and ears of a commander and their non-availability and non-employment results in troops being pushed into battle blindfolded. Reconnaissance troops based on light armour are of particular importance in armour operations. Armoured forces require reliable, timely and accurate tactical and topographical information. Military history is replete with instances where absence of reconnaissance troops has proved to be a serious impediment in the successful accomplishment of the mission. This has also been experienced during the two Indo-Pakistan Wars, ie 1965 and 1971, in which both sides employed armour in sizeable quantities.

For various reasons like failure to replace aging equipment, neglect of

lessons and obsession to increase the number of armoured regiments in the Army, light armour has been allowed to become extinct in India. This has created a situation that in the event of war our armoured forces will once again be launched blindfolded into battle and this may again come in the way of their accomplishing their mission successfully. This had happened in 1965 when 1 Armoured Division, which had to come to a grinding halt on the first day of its offensive due to lack of tactical and topographical information, failed to complete its mission. The Division did not have a reconnaissance regiment.

There is a requirement for re-introduction of light armoured or reconnaissance regiments in the Army, even if it has to be at the cost of converting some existing armoured regiments into light armoured regiments. A suitable tracked light armoured reconnaissance vehicle can be found by modifying the BMP II infantry combat vehicle for this role. An armoured car will have to be developed or procured. Light armour is an essential component of armoured or mechanised forces. Without it these forces are unbalanced and cannot develop their full combat effectiveness.

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12. Maj. Gen. JFC Fuller, *Armoured Warfare,* Eyre & Spottiswood, London, 1943, pp. 56-60.

Five : In 1962 India suffered a humiliating defeat at the hands of the Chinese. The British government promoted a dialogue between India and Pakistan to settle the J and K problem. Bhutto representing Pakistan for talks with Swaran Singh of India demanded the whole of the State (98% land) leaving the Tehsil of Kathua to India. The talks failed.

Six : Bhutto as the Foreign Minister of Pakistan by-passed the Army hierarchy and got the 'Kashmir group' to prepare Operation Gibraltar supported by Operation Grand Slam to annex J and K while India was still dazed with the Chinese trauma. The plan involved infiltrating soldiers in civilian clothes across the cease-fire line into Kashmir to trigger an uprising and severing lines of communication with Operation Grand Slam. When General Musa, the Pakistani Army Chief, learnt of the plan, he objected to it on two counts. First, the Pakistani intelligence agencies had not yet prepared a dependable network in the State to trigger and sustain an uprising. Second, the operation would surely escalate into an all out war for which Pakistan was not ready@. Musa's objections were eventually overruled by the President, Field Marshal Ayub Khan and Operation Gibraltar was launched in August 1965. It escalated into an all out war. Musa was proved right on both counts and the State could not be annexed. Under the Tashkent Agreement both sides agreed to revert to status-quo-ante.

Seven : During the late sixties, Pakistan intelligence agencies started a long - term plan to prepare a proper covert network of committed supporters in the State for an uprising at an appropriate time. Islamic sentiment and an utterly corrupt system of governance in J and K were fully exploited. It was this development which prompted me to formulate the subject 'Preventing Insurgency in Jammu and Kashmir' for my compulsory dissertation during the year long National Defence College course of 1971. I had gone to attend the course after commanding a brigade in Kashmir and the fact that an insurgency was being pre-

@Colonel SGS Mehdi, an outstanding officer who was an instructor at the Indian Military Academy before partition warned the Army hierarchy, in writing, that Operation Gibraltar[6] will end up as the 'Bay of Pigs adventure' by the Americans in Cuba because Gibraltar was poorly planned and prepared..

which sealed the fate of Kashmir. It appears that Jinnah was informed of the invasion plan only a few days before it was to be launched[4]. He was assured of success and was invited to be at Abbottabad for a truimphal drive to Srinagar. When the plan did not succeed, Liaqat put forward the excuse of a conspiracy by Mountbatten and Nehru to deprive Pakistan of the State of Jammu and Kashmir. It was obviously an alibi for the failure by the organisers of the invasion; that is the TRUTH.

Three : When the tribal invaders were nearing Srinagar the Maharaja of J and K offered to accede to India if the Indian Army could be sent to save Srinagar from the fate of the loot, arson and rape meted out to Baramullah. Mehr Chand Mahajan, the Prime Minister of the State, flew to Delhi and persuaded a reluctant Nehru to send the Indian Army with these words, "give Army and take accession or I will fly to Lahore to negotiate terms with Jinnah"[5]. Nehru got angry and asked Mahajan to go away. But Sheikh Abdullah, who was staying with Nehru, interceded and accession was accepted. Srinagar was saved by the Indian Army troops flown in. It was a touch-and-go affair.

While accepting the accession, Mountbatten conveyed the Indian Government's position that "accession will be finalised by a reference to people after the invader is pushed out of the State". The TRUTH is that this has not happened and the invader is still in occupation of what the Indians call the `Pakistan Occupied Kashmir' and Pakistanis call the `Azad Kashmir'.

Four : India complained to the United Nations against this aggression. The body in a resolution of 13 August 1948 and others linked to it postulated a three step solution :

* *Step 1.* A cease fire. This took place on 1 January 1949.
* *Step 2.* Pakistan to pull out of the State, this has not happened so far.
* *Step 3.* Future of the State to be decided by a reference to the people. When step 2 was not taken, India got the accession ratified by the Constituent Assembly of J and K to complete the process of reference to the people.

13. Gen Heinz Guderian, *Panzer Leader,* Michael Joseph Ltd., London, 1952, p 24.

14. Inadequate speed has consistently remained a feature of most British tanks right upto the present times. This has probablly inhibited tank power pack development in the UK. Even the current British Main Battle Tank, the Challenger has a lower power to weight ratio than its contemporaries like the US M-1 and the German Leopard II.

15. Martel, op cit., pp. 201-215.

16. Capt. BH Liddell Hart, ed., *The Rommel Papers,* William Collins London, India Edition, Natraj Publishers, Dehra Dun, 1977, p. 7.

17. General George S Patton, *War as I knew it,* First Indian Edition, Natraj Publishers, Dehra Dun, 1975, p. 414.

18. Capt. BH Liddell Hart, *The North African Campaign 1940-43,* First Indian Edition, Natraj Publishers, Dehra Dun, 1978, pp. 9-14.

19. Liddell Hart, *The North African Campaign,* op. cit., pp. 30-35.

20. Bryan Perrett, *Tank Tracks to Rangoon,* Robert Hale Ltd., London, pp. 99-148.

21. Bryan Perrett, op cit.

(a) 7 Cavalry, pp. 179, 181, 182, 210, 212, 214, 215, 223, 225, 226, 229-32.

(b) 11 PAVO Cavalry, pp. 151, 160, 161, 166-68, 179, 185-87, 210, 213, 214.

(c) 16 Cavalry, pp. 160, 164-66, 168, 173, 174, 210, 211, 219, 221, 223, 224, 231, 233.

(d) 8 Cavalry. Although this Regiment is not mentioned in this book, it arrived in Burma near the end of the Campaign and operated with 19 Indian Division during the clearing of the Toungoo-Mawchi Road into the Shan Hills.

22. Lt. Gen. Hanut Singh (Retd), *"Fakhr-E-Hind", The Story of the Poona Horse,* Agrim Publishers, Dehra Dun, 1993, pp. 193-206.

23. Hanut Singh, op. cit. and *"An Overview of Operations"*, by Lt Gen KK Singh (Retd). pp. 225, 226.

24. Hanut Singh, op. cit, pp. 243-250.

25. Brig RD Law (Retd), *"The Gulf War, The Last Hundred Hours," USI Journal,* July-September 1991, pp. 346-364.

26. *The Military Balance 1994-95.* International Institute of Strategic Studies, Brassey. London, 1994, pp. 154, 155.

27. Brig RD Law (Retd), *"Concentration, The Forgotten Principle," USI Journal,* October-December 1993, pp. 456-471.

Privatisation of Support Facilities in Defence Services - Problems and Prospects

COMMANDER A N SONSALE

INTRODUCTION

"To carry on War, three things are necessary !
Money, money and well, more money".
- Giap Jaeopa Trivulzio to Louis XII of France, 1499.

The fifteenth century old advice to the French emperor is as true today as it was then. But apparently it has not percolated down to the corridors of power in Delhi. The maiden budget presented by the United Front Government on July 22, 1996, has proposed a defence outlay of Rs 27,798 crores, an all time low in the last 35 years in terms of percentage of GDP[1] at about 2.38 percent. On September 2, 1996, the Parliamentary Standing Committee on Defence submitted a report projecting a shortfall of 72,000 soldiers and 20,000 officers in the Army alone[2].

In the existing socio political climate our defence services will continue to be plagued with two problems - first the continually reducing budgetary support coupled with inflation and second the perennial shortage of manpower. Despite remonstrations, a solution seems remote. These twin problems need to be addressed to in all seriousness. One of the possible ways is certainly "the privatisation of support facilities in defence services".

Over the years, the thrust has been to isolate all aspects of defence from private sector and keep them strictly under the government control starting with training, procurement of equipment, maintenance, storage of spares and defence related research and development. The aim initially was to ensure quality supplies and insulate the critical defence sector from vagaries of market forces, especially at the time of emergencies. However, with the passage of time, this policy has resulted in the defence services attempting to take upon themselves various kinds of functions which have very little connection with their primary role. This has also resulted in very poor teeth to tail ratios for all the three services. Our Air Force has 150 to 200 men for each flying aircraft[3], which is among the highest anywhere. The Indian Navy's uniformed strength is supported by an equal number of civilian employees. The average

Edited text of the Essay which won the First Prize in Group A of the USI Gold Medal Essay Competition 1996. Commander A N Sonsale is serving with the Naval Headquarters, New Delhi.

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* The second segment is in Bangladesh which is the most thickly populated country in the world with very few resources.
* The third segment is in Pakistan where it has been directly or indirectly ruled by the military since 1958. Those Urdu speaking migrants who went to the 'Muslim homeland' are either languishing in refugee camps in Bangladesh or having a rough time in Sindh.

A portion of the Pakistan establishment refuses to see this as the stark TRUTH. Similarly in India the establishment dismisses this TRUTH with a brisque remark-"Well, the Muslims asked for it". These attitudes are neither wise nor humane. Partition of India indeed was a monumental tragedy. It cannot and must not now be undone. But reconciliation can mitigate its ill effects.

Two : J and K problem is merely a symptom of the tragedy of the partition. It was precipitated when Liaqat Ali as the Prime Minister and Defence Minister assisted by Iskander Mirza, the Defence Secretary (later President of Pakistan), Khan Abdul Qayum Khan, the Chief Minister of NWFP and Ishaq Ahmad Khan working for the Chief Minister as a provincial civil servant (later President of Pakistan) decided to annex J and K by force. Bypassing the Army hierarchy, Colonel Mohamad Akbar Khan, DSO, the Director of Weapons and Equipment in the GHQ was used to evolve a two - phase plan[1] (Akbar later adopted the romantic name General Tariq while leading the Tribal Invasion). In phase one, 4000 rifles were issued mainly in Poonch area to trigger a revolt by the large number of demobilised Muslim soldiers who had served in the Indian Army during World War II. In phase two, the tribal invasion was launched on 20 October 1947. The Tribal Lashkars (Forces) were led by officers like Major Anwar Khan, a demobilised emergency commissioned officer of the ASC who was the Commander of the Lashkar (force) earmarked to capture Srinagar. The only remuneration that was agreed to with the Tribal Lashkars was 'to loot the non-Muslims'[2].

The invasion has been described in the book *Memories of Jinnah*[3] by his Kashmiri secretary MA Khurshid as *a criminal folly*

This chapter written by a man of great integrity, who is a friend of India as well as Pakistan has some nuggets of the TRUTH pertaining to the partition of India and the problem in Jammu and Kashmir. Sir James, as the Military Assistant to General Douglas Gracey, the Pakistani Army Chief in 1948-49, had a ringside seat during the tragic and fateful days after India was partitioned in August 1947. He grew up to be one of the most respected Generals of the British Army. He was a role model of an ideal Army Officer to the three batches of Regular Army Officers in the Indian Military Academy after World War II. The Indian and Pakistani cadets parted company in October 1947 when Major Wilson, then the Adjutant of the IMA, went to Pakistan with the cadets of that country. He was later posted to the Pakistan General Headquarters at Rawalpindi. Sir James agreed to the publication of this chapter by the USI, if it was reproduced verbatim. It is so. A few portions that are not relevent to the title have been omitted to reduce the length.

The Chapter will be of greater interest if I were to share with the reader our perceptions of the TRUTH of the major events in India - Pakistan hostility which appear to have blurred the vision in the two countries. There are **nine** such landmarks :

One : India was partitioned to provide a homeland to the Muslims of India. This, unfortunately, has not happened despite a very heavy price paid in human suffering. Thousands of Hindus, Sikhs and Muslims were butchered in the communal frenzy of 1947; millions had to leave their homes and hearths in the biggest migration of history. It is time that people of India and Pakistan took a dispassionate look at their hurts and hatred to see what is in the best interest of the people of the two countries. In the event, partition has turned out to be a great tragedy for the Muslim community of undivided India; it has been fractured into three nation states :

* The largest segment continues to be in India where it has shouldered a sense of guilt, has been suspected, exploited as a vote bank and in some areas has withdrawn into a ghetto mentality.

sailor-per-ship ratio in most Western navies is three hundred. In the Indian Navy it is four hundred and fifty[4]. In our 1.2 million strong Army, the fourth largest in the world, acquisition of high-tech weaponry and equipment in recent years has not brought about any significant reduction in the manning scale[5]. There is considerable flab in all the three armed services. Admiral J.G. Nadkarni,[6] has suggested that the size of the Indian armed forces could be cut down by 25 percent across the board without affecting the country's combat ability.

As a means of achieving this reduction in manpower and in associated costs and to increase the teeth to tail ratio of our armed forces the privatisation of support facilities is examined in detail in this paper. The country as a whole has taken irretrievable steps towards liberalisation initiated with Mr Manmohan Singh's policies. Disinvestment of Public Sector, though presently at a slow pace due to resistance from unions and poll related populist policies, must ultimately gather momentum due to multi-national competitions and economic realities. Sooner rather than later we are positively headed for complete privatisation in this country in line with more advanced Western economies. It is only logical that defence services should lead the way in this direction and bring the change at their own terms and to their best advantage. Of course there will be pitfalls and a great deal of thought process and debate will need to be undertaken. For what is being proposed is against all the traditional wisdom, against our system of keeping all "Military" matters in a shroud of secrecy. Having first crossed this psychological hurdle in achieving effective and optimum integration of defence and private sectors the more practical problems of designing and implementing adequate safe-guards and fall back options will need to be addressed, to avoid scams involving large sums.

In fact initial steps have already been taken. Navy is already involving private sector in selectively off-loading repair and refurbishment of its shipboard machinery whenever the Naval Dockyards find themselves overloaded or lacking the infrastructure or technological know how for some specific equipment. A lot of Defence Public Sector Units like MDL, MIDHANI, HAL are supported by a host of ancillary industries in the private sector. But all these are second tier supports. At the fundamental level our defence apparatus has a natural tendency to be self contained and self sufficient in all spheres. It is this fundamental bias which comes under question when we talk of privatisation of support facilities.

A cost effective, smaller, slimmer and smarter force dependent on support from outside by private sector and subject to market forces or a huge but cash starved and man power starved giant monolith having everything under its own fold but barely able to sustain itself and getting crushed under its own weight. It surely appears like a Hobson's choice.

AIM

The aim of this paper is to examine the implications of "privatisation of support facilities in defence services".

This paper has dealt with :-

(a) Areas and functions of armed forces that are amenable to support from private sector.

(b) Possible effect on the manpower cost and teeth to tail ratio of armed forces by utilisation of resources in the private sector.

(c) Advantages and shortcomings.

(d) Specific recommendations.

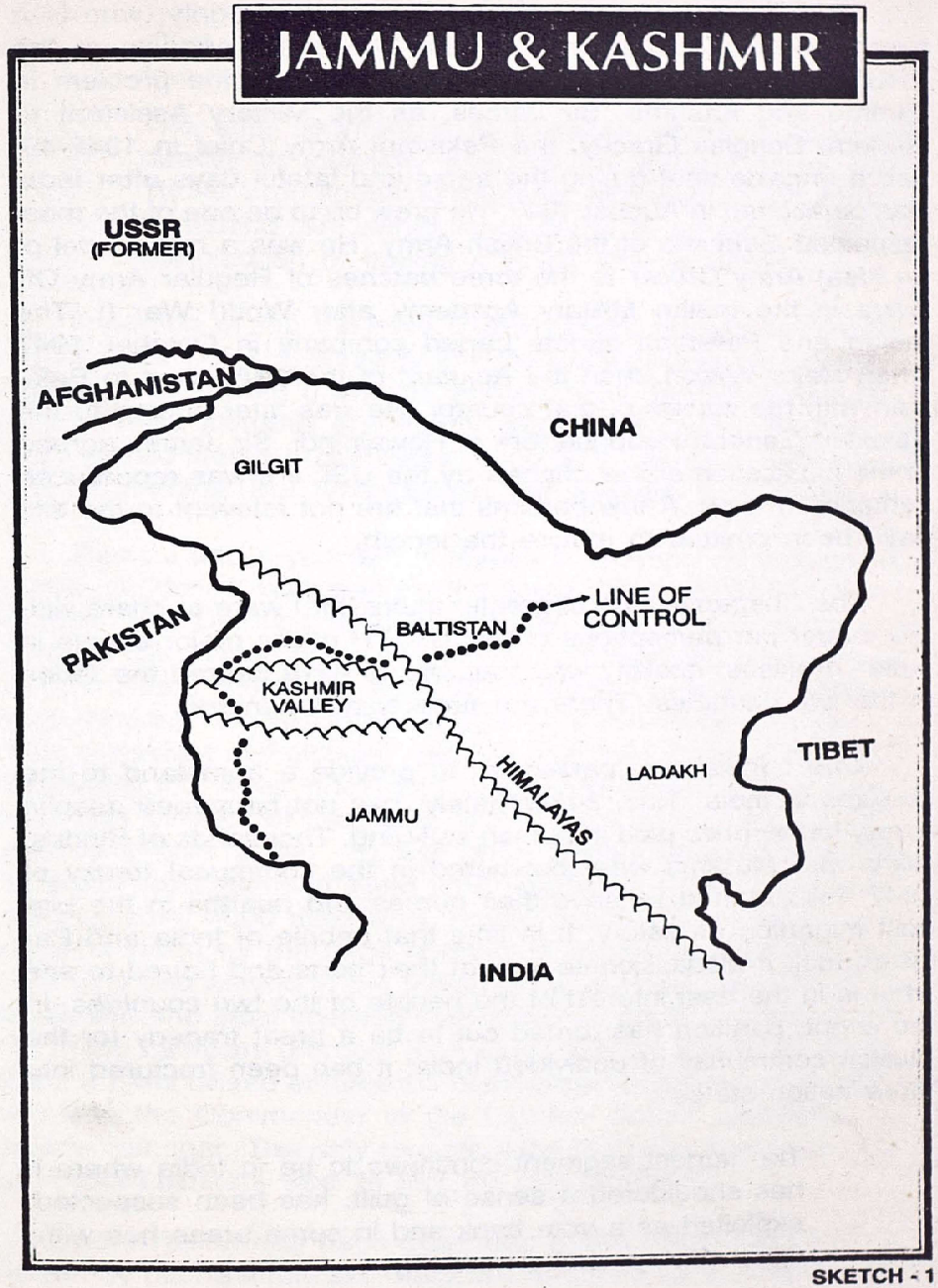
AREAS AMENABLE TO PRIVATISATION

MAINTENANCE

United kingdom converted their dockyards to autonomous bodies in the mid 1980's with self sustenance as the precondition. This brought in a lot of professionalism. The wages and overtime allowances earned by dockyards now had to be against real and efficient results. Also the Navy could more effectively expect and demand better value for its money from dockyards as a paying customer.

Presently, the complete refits and operational maintenance of Naval Ships is carried out by the two Naval Dockyards (at Mumbai and Vishakhapatnam) and two Naval Ship repair yards (at Kochi & Port Blair). These are government organisations with Naval Management and a civilian work force of over 30,000 workers and supervisors. Some of the refits and drydockings are also off-loaded to other shipyards such as Goa Shipyard, Cochin Shipyard, Hindustan Shipyard, Vishakhapatnam and Garden Reach Shipbuilders and Engineers (GRSE) Calcutta. Keeping total privatisation as the ultimate goal our repair organisations can be made autonomous and monetarily self sustaining to start with. Bidding against other commercial yards on a competitive basis is sure to bring in a lot of financial discipline and professionalism.

The requirement to off-load repairs at equipment level to trade has been recognized by the higher management of the Navy and is in force for some time now depending on the load on dockyards or when adequate infrastructure or expertise for a particular equipment is not available. But the system needs



SKETCH - 1

Jammu and Kashmir Problem : The Truth*

Part I

LT GENERAL SIR JAMES WILSON, KBE, MC, DL, (RETD)@

LT GENERAL (DR) M L CHIBBER, PVSM, AVSM, (RETD)£

INTRODUCTION

"By Time, verily man is in loss, except such as have faith, and do righteous deeds, and in mutual teaching of Haq (TRUTH) and patience and constancy"

— Sura 103

"Sathyam - eva - Jayathe" - TRUTH always triumphs.

— Upanishads

Discovery of the Chapter in this serial one of two articles of yet-to-be published memoirs was a part of the eleven years old struggle to promote India - Pakistan reconciliation. My wife, Dr Ramesh Chibber and I have been at it despite being labelled as starry eyed simpletons by some friends in India as well as Pakistan. Over the years our conviction that TRUTH (Haq in Arabic and Sathya in Sanskrit) ultimately prevails, has gained greater and deeper strength.

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*Chapter 11 Part I of the unpublished memoirs of Lt Gen Sir James Wilson, KBE, MC, DL, with an introduction and footnotes by Lt Gen (Dr) ML Chibber, PVSM, AVSM.

@Lt Gen Sir James Wilson, KBE, MC, DL is from the British Army. He was Military Assistant to General Douglas Gracey, the Pakistan Army Chief in 1948-49.

£Lt Gen (Dr) M L Chibber PVSM, AVSM, retired as Army Commander. He has authored a number of books, USI papers and biographical sketches of Field Marshal Montgomery, Marshal Foch and Field Marshal Slim.

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to be institutionalized rather than implementing it on a case to case basis. With significant strides towards indigenisation and standardization that the defence forces have taken, the OEMs (Original Equipment Manufacturers) can be persuaded to set up their repair and support facilities to provide on a contract basis. A similar approach could be adopted in case of various repair workshops of Army and Air Force.

This approach can be extrapolated to include supply of spares as part of the maintenance contracts. Here the respective material organisations will only carry the war reserves. The carrying of base and depot spares will be contracted out to OEMs under rate contracts or other suitable agreements. The reduction in inventory to be carried by the Material Organisations will be phenomenal. This will also bring about a major reduction in manpower, storage space and other inventory-carrying costs. This proposal, however, presupposes that with the passage of time more and more equipments would be indigenised and standardised. The methodology is already in force for hi-tech equipment like computers, fax machines and photo copiers which are being placed under maintenance contracts routinely from units. The complete set of equipment having commonality with those in the private sector and located in peace areas for all the three services can be placed under maintenance contracts with the OEMs and authorised agencies. All the non combat vehicles, office equipment such as air conditioners, fans, generators etc could be brought under this category. The repair facilities for specialist equipments used exclusively by the services such as weapon system, radars, sonars and equipment involving classified parameters such as those related to communication and electronic warfare will, however, need to be retained under government control for security reasons till Indian private sector starts participating in the field of weapons too.

FOOD

Presently, food is procured by Army Service Corps through contractors and then supplied to various units. There is scope for contracting out the complete catering services in peace areas to private contractors. Given the quantum of services involved; the private sector is bound to find it beneficial. Competitions would ensure quality and efficient service. Likewise in case of the Navy and Air Force the existing structure of catering and supply branches need to be continued only for ships and air bases in the remote and inaccessible areas.

The complete system of issue of ration, in kind, to servicemen could be privatised by having suitable tie-ups with reputed retailers on a unit to unit basis. Such systems already exist for items like, cooking gas and milk in various stations. Royal Navy has successfully experimented with contracting

out services in officers' messes, cleaning, gardening, security and some other functions.

POL

Another major area looked after by ASC and that could be privatised is the supply of POL to the vehicles. In places where sufficient consumption is guaranteed, reputed oil companies and retailers will find it economically viable to have exclusive outlets for use by services. Modalities to cater for the taxes and duties exempted in case of ASC supplies will need to be worked out. Naval and Air Force vehicles in peace stations could be supplied fuel in a similar manner. In case of aviation fuel for aircraft and diesel for ships and tanks, arrangements already exist with oil companies to supply directly at respective units around the country.

DEFENCE PRODUCTION

Today our defence production network comprises of thirty nine ordnance factories and eight defence public sector undertakings. The two together hire around 2,80,000 workers. Ordnance factories take away about 28 per cent of the defence budget. These industries produce all defence related goods - low technology clothing, boots, blankets and hi-technology products like weapons, ammunition, aircraft, ships, special alloys and materials to be used in nuclear and missile technologies.

The industrial policy resolutions of 1948 and 1956[7] have brought almost the complete defence production including non critical and fringe military products eg non combat stores, clothing and raw materials to be the exclusive preserve of the state, leaving only smaller items of dual military civil use with the private sector. At the time of inception of these policies there were strong reasons. Some of them were:

(a) Security.

(b) Absence of capital investment in the private sector.

(c) Necessity of stringent quality control for the private production sector.

(d) Socialistic ideology of the then government.

(e) Fear of growth of 'military industrial combines' (MICs) as existing in the West with considerable clout in shaping policy.

(f) The image factor; the peace loving, neutralist image would have been tarnished by a private sector arms industry indulging in sales pitch and competitive marketing.

essential ingredient of ensuring high integrity is to keep the channels of communication open with junior officers and the other is to accept the fact that the higher one goes in Service, certain social obligations, even towards one's subordinates, become essential. The organisation has to make provisions for this.

The Army is a great institution. During the four years of my retirement I have seen other organisations including the Corporate World at fairly close quarters. Most cannot hold a candle to the Army. The Army officer, specially the younger lot is in a class by himself and a very high class given the right guidance, motivation and example. It is the sacred duty of the top echelons to see that he is neither run down, nor his ideals sullied nor his dreams shattered.

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the report mentioned earlier, at the end of one year, brings out the unsuitability of the officer to carry on in the Army in that rank he should be retired. Further promotions ie, to the Army Commander's level and above should be strictly by seniority and the residual service,no more.

The suggestions made will ensure that :-

(a) An average officer has the prospect of reaching a Col's rank by the time he retires.

(b) The better officers will progress into high power appointments and at a younger age.

(c) The inter-se status of Army/Navy/Air Force ranks vis-a-vis the other Govt of India Services i.e., IAS and IFS will improve with a Brig and equivalent ranks being equated with a Joint Secretary's rank.

(d) There will be greater job satisfaction alongwith a greater rationalization of senior ranks and appointments.

(e) A Lt Gen's rank will become almost inviolate from any personal whims and fancies as has happened in the past some years.

One issue needs to be tackled last, not because it is the least important. On the contrary it is the most important ingredient of an officer's image: "Integrity". Much is said about it and much more left to be desired. Over the years it has become a questionable character trait. The fact that it even figures in an Annual Confidential Report form pre-supposes that this quality in a Service Officer needs to be commented upon. No amount of what should be done and not done to prove one's integrity has any meaning. Suffice to say that many of our senior officers in the past had set almost excruciatingly high standards of personal and professional integrity. Let their torch be carried forward. Even the slightest deviation from expected norms should be dealt with most severely. If an officer is in a position to help himself or his kith and kin or his favourites by unethical means he must be shown the door, there can be no compromise on this aspect. One

Thus for about half a century of independence the defence industrial base (DIB) has remained confined to the public sector and enjoyed the protected status with a captive customer in the Armed Forces. Devoid of competition the natural ills and inefficiencies have taken their toll on the organisation.

With liberalisation, foreign investments and tie ups with multinationals, a lot of capital has come to the country. With arrival of self certification and ISO 9000 series qualifications, the big hurdle of requirement of stringent inspection, quality assurance and quality control procedures has almost become redundant. It is against this back drop that we should see the level of inroads that the private sector has been able to make in the field of defence production.

As a sequel to 1962 and 1965 wars, some modifications were made in the policy resolution of 1956 and certain armament stores were allowed in the private sector. A separate Department of Defence Production under the Ministry of Defence was created to give fillip to indigenous production of defence related goods. Embargo on military supplies by certain foreign governments in 1965 further underscored the need to develop indigenous production of all defence related goods[8].

At ancillary and small scale level, in non critical spheres, the private sector has been interacting with DIB for a decade. Defence public sector undertakings have shed low technology items to private sector. Bharat Electronics Limited (BEL), Garden Reach Shipbuilders and Engineers (GRSE), Hindustan Aeronautics Limited (HAL) have all developed a network of small scale industries and ancillary units around them. The ordnance factories have also been sourcing various raw material and small parts from a wide spectrum of indigenous industries, including the metallurgical, chemical, engineering and textile groups.

In 1985 an APEX body, headed by the Secretary Defence Production and Supplies was constituted to take major policy decision regarding off loading of items from defence sector to civil sector. The annual report of the Ministry of Defence 1986-87[9] also pronounced that no new capabilities will be created in the defence undertakings for production of nonsensitive defence equipment, if capacity and capability existed in the private sector.

However, the government policies have not been consistently followed up. For example way back in 1988, selected manufacturers had a meeting with MGO, JS(DDPS) & DQA(A), apparently, at the instance of the then defence minister. The Bofors gun was exhibited and details of ammunition and fuzes for 155mm FH77B system, 125mm system and 73mm systems were provided to give the firms a chance to manufacture these. Even though the firms expressed confidence to take up the job it was not followed up[10] to its logical conclusion.

Inspite of availability of adequate skills and infrastructure in the private sector the progress of indigenisation programme has been very tardy mainly due to a web of bureaucratic procedures in development and acceptance, non professional approach of the concerned agencies and, in lot of cases, reluctance on the part of Services to try out indigenous items as against imported ones. Some attempts do appear to have been made to involve the private sector in major or medium technology levels eg., at one stage Kirloskars were involved in the development of an indigenous engine for the Arjun main battle tank. But finally the issue has not progressed to its logical conclusion[11].

It appears that in the area of weapons, weapon systems, arms and ammunitions there is not much scope for privatisation due to a variety of reasons. We shall continue to be dependent on public sector, import and licensed production.

Recent pronouncements of the Associated Chambers of Commerce and Industry of India (ASSOCHAM) indicate a growing interest and perception of profits in defence related manufacture in the private sector, perhaps due to recent policy pronouncements regarding the export of defence based materials and expectation of profits[12]. However they face the hard realities of tough international arms market flooded by a glut of surplus, state of the art equipment from multinational weapon manufacturers and from erstwhile Soviet Union.

CLOTHING

Provision of clothing to the soldier comes under the charter of Army Ordance Corps (AOC). The ordnance factories produce the bulk of clothing items. With liberalisation and the quality goods being produced by Indian manufacturers today there is scope for near 100 percent privatisation in the sector. Reports in 1992[13] have suggested that the central government was incurring an annual loss of Rs 50 crores due to the irregularities in procurement which is done under selective tenders instead of open tenders by ordnance factories. The rampant corruption in procurement coupled with gross inefficiency and unprofessional management of ordnance factories have resulted in services having to pay more than the fair market prices for these items. Merely by permitting the Indian Service Headquarters to buy from the open market and exposing the ordnance factories to competition, significant cuts in the defence bill are possible. In fact the Arun Singh Committee on defence expenditure had recommended the closure of low technology defence factories like those producing clothing because there is enough capacity in the private sector to produce these goods at cheaper rates.

To open the way for privatisation and for procurement of standard and

clear the jump at the highest possible level and subsequently being asked to clear lower heights. The reason being that with each subsequent passing year lost an officer would be required to hold an appointment requiring a lower criteria. Consequently a Lt Col commanding a unit would be on the top and one commanding a training battalion much lower down and one doing a Camp Commandant's job even lower. Such a system would ensure that the Command Stream is always manned by younger and highly capable officers. The Military Secretary's Branch should draw-up a list of appointments both in the Command Stream and in non-command stream, each consisting of command and staff appointments. With the system of entry into the NDA as suggested, the youngest officer passing out would be 21 years old. Taking the example of a really clever officer, when he is 36 years old with 15 years of service behind him he will be considered for promotion to a Lt Col/Col rank. Officers of comparatively lesser abilities should make the grade into the Command Stream in their second look (37 years of age and 16 years of service) or third look (38 years of age and 17 years of service). Thus the Command stream will always have younger officers with many years of service ahead of them, a somewhat similar system is in vogue in the British Army.

With the reduction in the base of the pyramid as a result of the reduction in the strength of the officers, the number of appointments for Brigs and above should be suitably and drastically scaled down. But a prior requirement is that a Brig should be equated with an IAS Joint Secretary to the Govt of India in every way. Given this proviso the reduction in the higher ranks should be done to rationalise the rank structure. The selection to ranks higher than a Col's will have to become very strict and selective. A Col should get only three opportunities to be selected to a Brig rank. A Brig only two for a Maj Gen's rank and a Maj Gen only one to a Lt Gen's rank. A Lt Gen should be reported upon once at the end of one year on his suitability to hold the rank. The reporting system should be fool proof with adequate participation by the Lt Gen reported upon himself. After this one report no further reports should be initiated on the officer unless a special report is required by any act of his, derogatory to his rank. In case

seniorities for promotions above a Major's rank should be determined by the first selection board that he is screened, to determine his suitability for a Lt Col's/Col's rank. This consideration should not be by the year of passing out but by a minimum age and the years of service put in. For example in 1997 the system should not just consider officer's commissioned in 1980 or 1981 but by a minimum age say 36 years and a minimum service say 15 years. Thus even an officer commissioned in 1982 if he is at least 36 years of age and who would in 1997 have 15 years of service behind him, would be screened for promotion. By delinking the year of passing out and the order of merit based on the passing out order from the selection system and replacing it with a minimum age and service requirement we will automatically take the first step towards making the higher ranks tenable by a younger, more capable lot as will be apparent later in this discussion. Besides the minimum age and service limit, other minimum mandatory requirements like having attended certain basic courses, passed promotion examinations on time, holding a substantive Major's rank and such criteria will have to be met before an officer is considered by the selection board. Selection for a Lt Col's rank should be not by course batches based on their year of passing out, but by a minimum number of years of service put in, a minimum age and other qualifying criteria which can be suitably laid down. The seniority of officers for future considerations should then be fixed from this occasion onwards. Only such officers who clear the selection board in the first three chances should be considered for command of active units and future promotion in a Command Stream.

An officer should be considered for promotion to a Lt Col's rank till the age of 45 years. That means that he would have nine chances in all to make the grade to a Lt Col's and thus a Col's rank. After these are exhausted the most self-opinionated of officers will accept that they are not average material. In the first three looks the really Above Average and High Average officers should be cleared; subsequently the criteria should be lowered with each passing year so that in 45th year of his age the truly Average officer should be able to meet the selection criteria. The method can be compared to a high jumper first being required to

established products of big companies, an institutionalised mechanism will have to be put in place for periodic review of existing specification, which needs to keep pace with changing times and technologies. For example the specification for shoe canvas oil resistant sole, meant to be used by airmen while working on aircraft, lays down stringent conditions on colour fastness to light and washing. This is superfluous considering the environment and type of usage envisaged for the product. Some steps have already been taken in this direction. For example, Air Force[14] is procuring Shoes Canvas white (TIGRE BRAND) from M/s Bata India Ltd for Rs 46.60. Although this doesn't conform to the laid down specification, but it more than meets their requirement and is also cost effective. Similarly Air Force is procuring Ultra Violet Sun Glasses from RAYBANS for issue to pilots at a cost of Rs 1150/- which would have been several times costlier, had they to lay down their own specification and then get them custom made.

Since the 1980s, to some extent clothing items eg. boots, blankets and so on have been gradually shed to the private, joint, cooperative and small scale sectors[15]. However a lot of ground still needs to be covered in this direction.

Defence Research and Development

The Indian Defence R&D base is almost entirely dependent on the Defence Research and Development Organisation (DRDO). The Organisation was established in 1958. Over the years the organisation has grown into a giant network of over 40 laboratories and employs over 30,000 personnel[16]. The organisation covers practically every spectrum of service research ranging from aeronautics, life sciences, electronics, engineering materials, general stores, naval science and technology, rockets, missiles, vehicles etc. The organisation has quite a few achievements to its credit. Significant development has been made in the areas like food preservation technology and vehicle technology and testing. In exclusive military fields it has developed packages, eg, the Nag, Trishul, Prithvi and Akash systems, the pilotless target aircraft and reusable rocket pods, to name a few. Over the years the DRDO has grown significantly. From a modest budget of Rs. 1.5 crores in 1961[17] it had a budget estimate of Rs 740 crores in 1994-95[18]. The organisation has been headed by eminent scientists like Menon, Bhagvantan and Nag Chaudhari. This significant growth has resulted in a multifaceted R and D base and provided multi-disciplinary facility under one roof, and at the same time has led to a rigid and systemised command structure based on equated ranks, departmental promotions and the trappings of the usual Indian bureaucracy. The list of failures of DRDO is not insignificant. The much berated Arjun MBT, Marut HF-24 and much delayed LCA and ALH projects have cost the country dear[19]. Incidentally defence R&D

today accounts for about 4.5 per cent of defence expenditure[20]. Also the working conditions are not good enough to attract the best brains in the country. The strictly hierarchical structure and limited opportunities don't create the correct temperament for research. There is a case for off-loading a lot of our defence R&D to the private sector, at least those sectors which have dual civil and military applications. This has been amply proved in a lot of cases. For example the product inventory of the BEL includes TV picture tubes, silicon and Germanium semiconductors, ICs, capacitors and crystals and components for industrial and medical application. All these have been developed with upto 70 percent indigenisation by R&D activities within the company in collaboration with the DRDO. Integrated functioning with the private sector would enable curtailing of R&D effort costs. This will also introduce an element of competition, free control and intellectual stimulation in the field.

A credible technical R&D base has been built up over the years in our academic institutes like IITs, IISc and also in the private sector. But there is not much technical interaction between DRDO and these pools of excellence except at a purely academic level wherein certain service officers and DRDO scientists pursue higher studies. Well established facilities for training in management and related disciplines exist in various autonomous and private institutions and some of the human resources development programmes run by the DRDO, eg medical entomology, psychology, personnel selection duties, operations research, systems analysis and so on can be suitably integrated. A beginning has been made in this direction with the DRDO running a MSc Computer Science education programme in seven universities to train software professionals for induction into the organisation. This approach, if taken to its logical conclusion would certainly enable DRDO to rationalize its structure and bring down numbers to a reasonable extent.

Even in the UK on whose earlier pattern our DR & D base is organised (as in the 1950's) a shrinking resource base and increasing duality in application has led to increasing participation by the private sector in military R and D in the last two decades.

The US system is essentially a hybrid between government owned institutional research and publicly funded development activities of profit oriented private corporations. A sizeable number of army, navy and air force research laboratories in the USA function directly under the Pentagon, while all the weapon systems including missiles, aircraft, combat vehicles are developed by private corporations utilizing Pentagon funds. Thus an integration of the R and D efforts is achieved, utilizing both the private and government sectors. Perhaps the greatest benefit is in the intellectual stimulation of both sectors, with an element of competition.

retirement rank for regular officers and to make the selection and advancement procedures more rational and transparent. The minimum rank for retirement of an average officer should be that of a Colonel (Col). This has two implications. Firstly, a majority of officers in a particular age bracket would retire as Cols. Thus they will be of an age when they can still seek employment after retirement. Secondly, the planning of the annual intake into the NDA could then be made proportional to the strength of Cols retiring every year. Combined with this should be the proviso that a Lieutenant Colonel (Lt Col) and a Col's ranks and appointments are bracketed. Thus an officer selected to be promoted as a Lt Col will automatically become a Col after a certain number of years say three to four without being screened by another promotion board. All active unit command appointments should be held by Lt Cols and all grade 1 staff and non-active command appointments by Lt Cols/Cols.

With a Col's rank becoming the minimum rank at which an officer of average capabilities should retire, it is necessary to devise a selection system which allows an officer to reach this rank in the course of his service. Regrettably one has to accept the generally held belief that in the Indian Army as of today and for quite some time now we have a rejection rather than a selection system in existence. A true selection system should aim at ensuring that officers of high calibre are progressed faster in their careers and at younger ages so that their capabilities are available to the Army for periods longer than they are at present. Next, it must be supportive of not so brilliant officers so as to enable them to rise to the limit of their potential and lastly it must be both so humane and transparent that those whom the system finally rejects accept such a judgement of their abilities as fair and unbiased and, therefore, unchallengeable. Any objective study of the present system will show that it fails on all these counts. The first step that has to be taken in devising the new selection system is to throw away the order of merit list that is based on the order of passing out from the IMA. The inputs for devising this order of merit list has just no relevance in determining an officer's progress in his career after passing out. This list is acceptable for protocol purposes and no more. The laying down of officers

grade career at a time in their lives when other organisations are not ready to take them; in that the Armed Forces can score over these rivals. Besides the Armed Forces want primarily the younger lot, who can be moulded and not those who have already been moulded. The key term in this argument is Top Grade. How do we define Top Grade? To my mind one can say that it is a career held in high esteem in the mind of the general public, is lucrative and job content-wise highly satisfying. The general as well as responsible public opinion regarding the Army has been already narrated. The lucrativeness of this career has certainly to be improved constantly and the job content made more and more satisfying. This last is a purely in house affair of the Army, while the lucrative aspect too requires a major input from the Army itself. Let us examine these aspects now.

Whatever be the resources of the Government, there is a limit to which it can foot the pay bills of serving officers and the pension bills of the retired ones. Our failure has been our inability to attract suitable youth to the officer's cadre and that of misusing this resource. The problem has arisen post 1962 - after our debacle against the Chinese - when the inabilities of the senior commanders got translated not only into a rapid expansion of the Army but the almost astronomical expansion of the officer's cadre. This came about amongst other things due to a rapid decline in the quality of the Junior Commissioned Officer's (JCO's) cadre. A reflection on the abilities of the officers themselves. In fact with the proper and effective use of the JCOs we can reduce the strength of officers by a third. Of the two-thirds that remain almost half or a little less should comprise of a mix of Short Service Commissioned and Regimental Commissioned Officers. We have to lay greater emphasis on the training, job content and responsibility of our JCOs and consequently of the Non-Commissioned Officers (NCOs). This will greatly reduce the base of the pyramid at present formed by the Regular Commissioned Officers. The officers cadre will also become more manageable, than it is at present.

The next step in officer management in order to make the Army a "lucrative" and a "satisfying" career is to fix a minimum

The French while setting up their arms industry went beyond the R and D effort linked to the three services by creating a 'fourth' superior service. Recruiting from the best and brightest graduates from the famous Ecole Polytechnic, the service acted as a stimulant to the R and D effort, with a strong corporate identity and motivation.

It is thus evident that there is scope for both privatisation and interaction between the DRDO and the private sector. Modern defence production and development is a multi disciplinary activity involving practically every element of the metal, electrical, engineering, transport and management disciplines. It is in fact mutually beneficial for both the sectors to integrate and benefit by reverse spin offs. In any case a narrow, restricted and bureaucratic Defence R and D structure is detrimental to its own development.

However, it should be kept in mind that such integration may not lead to rapid leap to the hi-tech state-of-the-art level. For the private participation will essentially be in the areas of dual application. Defence will continue to bear the brunt of R&D expenditure in pure military technologies where, in the absence of any definite prospects for short term commercial returns, private financing is not likely.

TRAINING

To a defence person trained in the traditional mould in any of our elite training establishments, even a thought of privatisation of even a part of training process may appear unthinkable and even preposterous. However, an honest introspection would reveal the merits. Brigadier NB Grant[21] and N Kunju[22] have argued very passionately about the irrelevance of traditional mould of training in today's circumstances and economic inviability of spending long and costly years in training. All the three Services have gone ahead and created huge training infrastructures of their own and introduced various schemes of entry, ostensibly with a view to attract better quality of youth to join the Services, especially so, in the technical branches. This has resulted in creation of a repeat infrastructure for basic academic studies in a host of disciplines like medicine, engineering and management. Even economically advanced nations have not found it viable to run parallel institutes of their own.

In fact many countries have privatized even very specialised and professional parts of their training successfully for a long time now. As long ago as 1935, M/s Airwork was contracted to operate an Elementary and Reserve Flying Training School at Perth for the Royal Air Force[23]. During the Second World War, M/s Airwork trained over 40,000 aircrew for the RAF and subsequently provided assistance in this field for many air forces in the Middle

East, Asia and Africa. M/s FR Aviation has for some years been providing Radar Target and EW training services for UK defence forces. USA, Germany, Australia and Sweden are amongst other countries which have privatised target towing and EW training. In order to reduce infrastructure using privatisations the Royal Navy was able to reduce the number of shore training establishments from 22 to 12 between years 1983 and 1993[24].

In India the defence services spend maximum time and resources on HRD. That the training in defence services will be more as compared to other civil services and private corporate houses is inevitable due to the specialised nature of their duties. However, it is felt that there is scope for utilising the facilities in private and civil institutions. Merchant Navy has increased the annual turn-out of officers for the executive branch from 250 to 650 by reducing the training period and by raising the educational qualifications at entry. Similar policy has been implemented for the technical branches of the merchant Navy.

Similar approach can be considered for the armed forces. All the prestigious and elite training institutions of the services need to be converted to institutes of higher and specialised learning in the true sense. Raising the entry level qualification for officers and men in uniform will also result in the following benefits :

(a) Savings in training costs.

(b) Increased availability of officers and men for jobs in units. This will to some extent offset the severe human resource crunch being experienced today.

(c) The individuals joining the services would be relatively more mature and would join with "open eyes" in the true spirit of "volunteer forces", having had the opportunity to critically examine all the career options open to them.

Possible Effect on Manpower Costs and Teeth to Tail Ratio

The capitation cost of a civilian is 25 to 30 per cent less than his uniformed counter part[25]. As such any work handed over to civil sector must essentially lead to some savings. Kaushal[26] estimated a possible saving of Rs 2000 crore if the number of defence personnel could be cut by 25 per cent in the three services as recommended by Admiral Nadkarni. Subjecting ordnance factories to open competition at 1994 levels was estimated to give an advantage of Rs 1000 crore to Rs 1500 crore. A similar treatment to DPSUs was estimated to yield a saving of Rs 400 crore to Rs 700 crore.

those joining the National Defence Academy (NDA) at present should be taken in. When the NDA was first established the aim was to catch them young. We have, by increasing the educational qualifications required for entering the NDA, ourselves destroyed its very ethos and purpose. It is rarely appreciated that when young people finish their Plus Two (Twelveth class) levels they have a great choice of professional careers available to them. The entry into the NDA at class 10 level will firstly ensure that boys of a younger age, with lesser exposure to the poor environment in most of our ill-disciplined educational institutions, will have a choice of a top class career available to them. Most parents and their sons (and daughters) would like to get into an assured career at such an early stage in their lives. The stay in the NDA could be increased by two years to ensure that the cadets pass out as graduates - although in the opinion of this writer that is not essential. On the other hand, the Services may find it more beneficial to have a four years course at the NDA equated with a University's B.Sc degree by an act of the Parliament. In this context the total contact period calculated in hours with subjects essential for earning the degree works out to be more than what even a good conscientious student puts in on an average in a reasonably disciplined well run College. Carrying this argument further, the additional one year, ie, for a five year course could be offset by doing away with the one year's training at the IMA for NDA graduates. Cadets should pass out from the NDA and go straight to their respective Arm or Service institutions for a comprehensive Young Officers' course. The Navy and the Air Force will also benefit from such an arrangement and will have no objection to re-structuring the NDA Course.

At this stage it needs to be stated again that no amount of improvement in pay and allowances and other benefits will ever attract the top bracket of our youth - whatever that may mean - to the Army if we go to them at a stage in their lives when other equally attractive or better avenues are available. With progressive liberalization in our economy and with the entry of other disciplines and modes of earning into the society this relegation of all Government services, to a lower choice level will continuously increase. It is only if we offer the youth of the country a top

(d) The junior officers feel that he is misused and unheard by a rather disinterested and often distant set of seniors who very rarely show any sympathy let alone empathy with their subordinates-specially those at the levels of Colonels and below.

(e) Lastly, the views of the Joint Secretary from the IFS. These are articulations of an immodest group of people whose arrogance is based neither on any deep intellectual content nor on any worthwhile achievements of their service over the past so many decades of its existence. Hence one can say with confidence that their views should be ignored, as indeed they are by the IAS, in such matters.

The true image of the Army officer is perhaps an amalgam of the various images described above. One thing, however, stands out after viewing such an image it needs re-burnishing, and that too very quickly and the task must start at home. There should be a ban on any public declaration that the quality of officers is deteriorating day by day. Measured by what yardstick is this announcement made even if only to impress various Pay Commissions and press the Government into loosening its purse strings? Over the years this nation has accumulated a huge debt to the Army officer who has repeatedly frustrated all efforts of enemies to dismember the country. More recently it is this Army officer, the young Subaltern and Captain and Major, the dedicated Colonel commanding his over worked unit and others, who have saved Kashmir for India. These officers continue to fight the country's battles in various parts of India and they uphold the nation's flag high. They are sick of not being given adequate peace tenures, accommodation and compensation. Yet the Army Headquarters proclaim from the roof tops that the Army officer is not amongst the best of what the country has. In fact he is amongst the best in the world. The public already agrees. The quality of the material coming into the Army has to be defined, actually it is simply stated. The young men aspiring to join the Army should be physically hundred percent fit and capable of being moulded into good junior military leaders with further training. This latter aspect requires that boys of an age younger than

The possible savings by any rationalization of training efforts and time can be gauged by the massive costs involved in training. A fully qualified pilot for example costs the national exchequer close to Rs 7 crore[27]. The cost of training at NDC per officer was estimated in the year 1986 to Rs five lakh[28].

Since all the support services are managed by tail part of the defence forces, the improvement in teeth to tail ratio will be directly proportional to the amount of privatization that can be introduced.

ADVANTAGES

REDUCTION IN MANPOWER COSTS

In 1994-95 the defence pensions cost the national exchequer a whopping Rs 2,706 crores[29]. With ever increasing number of defence pensioners due to increased longevity and yearly addition of over 60,000 defence personnel to the retired pool[30], this expenditure is to go on increasing. About 40 per cent of defence budget is spent in paying salaries to the armed forces and to the defence civilians[31]. With the recommendations of the Fifth Pay Commission this expenditure will go up substantially.

IMPROVEMENT IN TEETH TO TAIL RATIO

Any privatisation will be in the tail services and in civilian staff supporting the fighting forces. Hence any step towards privatisation will invariably result in an improvement in teeth to tail ratio.

INCREASED EFFICIENCY AND PROFESSIONALISM

Any privatisation is bound to improve the professionalism and efficiency in the respective area. The competition and market forces will ensure that only the best, the most efficient and professional outfits survive.

IMPROVED ACCOUNTABILITY

The user and the supplier both will be more accountable to each other and to the system because they would be morally and contractually bound by MOUs, rate contracts or some other legal documents.

DECENTRALIZATION

Any contracts with private suppliers and companies will have to be serviced and monitored at unit and formation level. This would bring about a

lot of decentralization and speed. A beginning has been made in the Navy with the concepts of New Management Systems (NMS). The results are very encouraging. The decision making has become faster. The unit and formation commanders have got tremendous amount of flexibility and the tendency to look upto Delhi, for every small thing, has significantly come down.

INCREASED JOB OPPORTUNITIES : POST RETIREMENT

Increasing private participation in various facets of defence services is sure to generate better post retirement job prospects for the relatively young but well qualified and disciplined work force who would be familiar with exact requirement of the defence forces.

SHORTCOMINGS

Rear Admiral JJ Blackham, R.N. in his address to industrialists[32] in November 1993 brought out reasons for wishing to keep some functions at least in the Naval hands in the context of privatisation of support facilities in the Royal Navy. They included :

(a) A wish to provide shore appointments for naval personnel to balance their time at sea. Even sailors like to visit their husbands and wives and be present, if not for the birth of their children, at least for their conception!

(b) A need to imbue our people with much of naval culture and ethos during training.

(c) A need to preserve proper branch structures, if we are to be regarded as a reasonable employer.

(d) A need to maintain an adequate pool of manpower to provide for re-generation in crisis and war.

(e) A need to maintain adequate manpower to respond to calls for aid to the civil or to cater for calls for ceremonial without prejudicing the operations of the fleet.

(f) A need to keep naval establishment under naval command (this does not, however, mean the Navy doing every thing)."

The above when extrapolated for Army and Air Force bring out some of the issues which need to be adequately considered prior to introduction of privatisation in a big way.

Of the two Ministers of State for Defence, one was of the view that there was no other organisation as effective and well run as the Armed Forces. He was, however, unhappy with the knowledge that some senior officers would go to any unsavoury lengths to further their own interests. The other, with vast experience of other disciplines behind him, felt that the senior officers were incapable of a large, comprehensive approach. That they missed the wood for the trees and as he pithily put it, "rather than finding their way back to the woods, go about merrily chopping the trees and spoiling the environment". He was also amazed that the three Armed Forces have no, all inclusive, comprehensive joint plans.

We thus have a fairly clear idea of the image of the Army officers, in fact of all the Armed Forces Officers that exists in the minds of others. Clear but nevertheless fractured. Fractured because there is no one single mirror to view it in. Thus we have :-

(a) The general public including top opinion makers and achievers of the nation holding the Army officer in high regard. That is not the same thing as saying that they would leave their various fields and rush to put on the Army's uniform.

(b) We have the civil servants dealing with the Army who feel that the problem area is really at the senior levels where all the compromises with values take place. Similarly, the politicians who while holding the Army in high regard are at the same time convinced that it is within their own professional boundaries that the Armed Forces must operate. They too feel that many senior officers often give priority to their own interests.

(c) The senior officers, both serving and retired, who keep on repeating that hackneyed old line about the quality of Army officers going from bad to worse as time passes. As to what this quality should be has never been clearly and objectively defined. Each has his own definition.

Headquarters, although most times such cases have many loop holes and are often contradictory. Both felt that although at lower levels the Army officer is almost as good as one can expect but when arriving at higher levels and specially in the case of senior officers who come to hold the appointments of Principal Staff Officers (PSO's) and above, their personal interest and benefits take a priority over that of their Service. This is true of all the three Services. Consequently, many become easily pliable, some even subservient to the civil servant, let alone the Minister. For such officers to strike a posture of being paragons of virtue and up-rightness that they often do in public, particularly in front of their juniors does not fit well with their actual behaviour. In other words very few senior Armed Forces officers have the right to run down the civil servant and others for the lack of moral values. Lastly, both felt that the Army should, as the Navy and the Air Force have by implication accepted, that in India civil control of the Armed Forces included control by the civil servant and the politician. It is only the civil servant who understands the politician's mind, in whom the political boss confides and who has access to all other ministries and departments of the government at the Centre and in the States.

Finally, the views of a former Union Home Minister and two former Ministers of State for Defense. The former Home Minister was of the view that all political parties are agreed on the fact that the Armed Forces are to be kept apolitical. He was also appreciative of the fact that the most powerful element in ensuring this quality of the Indian Armed Forces have been the Armed Forces themselves. His efforts had always been to see that the Army was never exposed to unnecessary bickerings and mud-slinging by irresponsible politicians. He was, however, critical of senior officers addressing the media on policy matters even on those concerning their own departments. According to him, policy announcements should be made only by political heads of departments and ministries. Any announcement of public interest should be made through press notes issued by the Defence Public Relation's Officers (PROs). The senior officers should not seek public limelight since it sends wrong signals. He said that during his time, he had forbidden even the civil servants to use the media for expressing policy matters.

Dependence on Private Sector

Any privatisation, however, will render the services dependent on a particular supplier or a group of suppliers. A private agency being totally market driven has a tendency to overcharge in times of crisis or use the leverage to gain some other benefits. Navy has faced this kind of problem repeatedly. Given the long life of equipment once inducted in the services and the need for a life time of product support, adequate checks and balances need to be catered for at the stage of induction itself and availability of adequate competition and multiple sources.

Loss of Flexibility

Having all the operational maintenance and logistic agencies directly under his command gives a military leader a lot of flexibility. This, to an extent, will need to be sacrificed in case of contract driven services and support facilities. But since this gamut of privatisation is envisaged in peace time locations away from the international borders, it should work satisfactorily after the initial teething troubles.

Loss of Growth Potential

With the proposed privatisation a lot of senior vacancies will have to be given up. This is likely to have a detrimental effect on the morale of the forces. This could be compensated by creating alternate openings in various watchdog organisations if private support facilities are to be adequately monitored.

Corruption

Any privatisation would perforce involve decentralization of financial powers wherein lay the seeds for scams. The possible ill effects on the functioning and on the moral fibre of the servicemen need to be considered very seriously. Today the armed forces are considered one of the cleanest professions and it would be a tragedy if anything should happen to this clean image.

Specific Recommendations

The agenda of economic liberalization and social upliftment set by our political leadership makes it impossible for our armed forces to get the kind of share of national budget that would sustain the present level of manpower and would also, at the same time, maintain the operational readiness at the desired levels. Our armed forces, even if they are able to assert themselves to

get their rightful share of the budget will find it increasingly difficult to meet the spiralling technology costs. For example from the days of Wright brothers through the F-18, aircraft costs have increased by a factor of four every ten years. In the year 2054, the current US defence budget will purchase only one tactical aircraft[33]. Even otherwise, in keeping with rest of the economy, privatization is here to stay and the armed forces cannot remain aloof. Hence the following recommendations are made:-

(a) *Institutional Approach to Privatisation* – Some very hard decisions need to be taken which go against the very basis of setting up and keeping the complete gamut of Defence Apparatus, all related production and services, under government control. If it is not possible to increase the budgetary support to the Services it needs to be ensured that every single rupee that is allotted to the Services gives the best possible value. Having agreed to the basic principles involved, a "Standing Committee for Institutional Approach to Privatisation of Support Facilities in Defence Services" needs to be set up, with members from the three services and all concerned ministries at sufficiently high level. It should identify the areas for privatization and work out the exact modalities on a progressive basis and also monitor the progress.

(b) *Training* – All the training facilities available in civil sector be made full use of. The service institutions be used to impart only the specialist service training for which no institutions are available outside.

(c) *Repair Organisations* – The facets of ship repairs which are common with the merchant marine can be privatized. Only specific areas exclusive to warship and submarines need be retained with Dockyards. These could be works pertaining to weapons, sensors and equipment of classified nature.

(d) *Equipment Repairs* – For equipment repairs, memoranda of understanding be entered with Original Equipment Manufacturers to provide servicing and repair facilities. Wherever, economics of scales so permit, the OEMs can be persuaded to set up facilities for the exclusive use by the Services.

(e) *Non Combat Vehicles* – In case of non combat vehicles, again the facilities and management of base repair workshops for repair and maintenance of service vehicles in peace areas can be off-loaded to OEMs and their authorised service agents under contract or MOUs.

(f) *Spares* – In case of spares for ships, vehicles and if possible aircraft, various OEMs be asked to maintain stock of spares under rate contracts,

Each one of the latter decried the lowering of the standards in the Army, the urbridled ambition, the growing lack of personal integrity and so on. The younger officers "cribed" that they did not get any job satisfaction. They had not joined the Army to ensure that the toilets were working in guest rooms when senior officers visited their stations or accompany them and their wives on shopping trips. Even worse was to be assigned to over-see setting up of tents and making other such arrangements during various unit and formation functions. Tasks which should be handled by JCOs, nay L/Nk's, were now being handled by Captains and Majors. These junior officers were also of the opinion that the senior officers, specially Brigadiers and above, hardly interacted with junior officers even on social occasions. Besides, senior officers were apt to moralize without setting personal examples of social and professional behaviour.

Now a few examples of what some other Government services feel about the Army officers - in fact about Armed Forces' officers. The Indian Foreign Service (IFS) officers feel that the officers of the Armed Forces are by and large uneducated and the senior ones are unable to grasp or articulate matters concerning larger issues. This was an opinion expressed to me by a Joint Secretary in the Ministry of External Affairs (MEA) whose father was a highly respected senior officer of the Army in his days. That such views are shared by others in the IFS can be gauged from the reported statement of Mr. Dixit, a former Foreign Secretary to the effect that the Army was unable to grasp the political directions given about its role in Sri Lanka.

Mr. Dixit was then the Indian High Commissioner in that country, and knows what he is speaking about. We have yet to see any senior General who was directly or indirectly responsible for the conduct of operations in Sri Lanka challenging this criticism. Now for the views of two former Defence Secretaries. Both felt that there was no unnecessary and a contrived friction between the Indian Administrative Service (IAS) and the Armed Forces. The IAS was always ready to protect the interests of the Service officers. In the Ministry of Defence itself the civil servants by and large uphold the cases put up by the Service

During my tenure as Commandant of the College of Combat, I introduced a subject on integrity and self respect as part of the leadership series in the curriculum of the various courses run at the College. We sent officers to interview some very senior and highly respected citizens and opinion-makers in the country to get their views about the Army's standing. They ranged from Mr. J.R.D. Tata, Mr. Palkiwala, Swami Chinmoyananda and many others from various fields. I was amazed and almost embarrassingly so at the unstinted praise and respect they had for the Army. Almost all of them said that if the other organisations had half as much standing in terms of dedication, integrity and professionalism as possessed by the Army, India would be a different and a magnificnet country altogether. A small vignette from Mr. Tata's meeting with the officer sent to interview him would be appropriate. After the end of the inteview, Mr. Tata said that he was a small eater and ate his frugal lunch in the office but would the officer - a Gunner Colonel - please take Mr. Tata's car and have his lunch at the Taj. The officer politely declined since he already had a lunch engagement. "See, what I mean," said Mr. Tata, with a twinkle in his eye, "only an Army Officer would refuse JRD Tata's invitation to lunch since he already has accepted an engagement elsewhere". The same attitude of respect and affection is found amongst the general public. One would then expect that with such a fund of good will present amongst the highest and the lowest in the land, the Army should be flooded with requests from men of noble qualities wanting to get in. On the contrary, people make a bee-line for major industries like Tatas and Birlas and other similar organisations rather than for the Services. In fact if these organisations were to open wide their portals to serving Army officers, most-irrespective of rank-would take off their uniforms and head for the doors of the nearest corporate house. And why only the Army, Navy or the Air Force, even the members of the Administrative, Foreign and Police Services and others would do so. Then again not only in India so would they in the most affluent of countries where the salaries and benefits of the Armed Forces are from our point of view, unbelievable.

Let me now narrate the views expressed by Army officers ranging from serving Captains to serving and retired Generals.

to be made available through their respective repair outlets mentioned at serials (c) to (e) above. Suitable payment procedures will need to be formalized to ensure commercial acceptability and speedy disposal.

(g) *Military Farms* – All the military farms can be wound up. In the era of green revolution and operation flood, they have practically lost their relevance.

(h) *Fuel Supplies* – Fuel supplies to all the service vehicles in peace areas could be privatised with appropriate arrangement with oil companies. Exclusive outlets for services, wherever possible and suitable mechanism for obtaining the benefits of tax and duties exemption to the services will need to be formalised.

(j) *Clothing and Other Low Technology Items* –

(i) Close to 1.4 million service men to be clothed in a limited type of uniforms, is a dream target that the best of private companies would love to acquire and the services can really call the shots and get good bargain.

(ii) The ordnance factories producing clothing items can be handed over to private managements in a phased manner.

(iii) The other low technology items being produced by Ordnance factories such as boots and blankets need also to be subjected to competition from open market to achieve best value of money for the services.

(k) *Specifications* – A suitable mechanism be set up to constantly review the services specifications to facilitate introduction of suitable products from standard ranges of reputed manufacturers to achieve maximum cost benefits.

(l) *Rest of the Defence Production* – All the defence related items, which have dual application in Civil and Military be sourced from private sector. DPSUs and Ordnance factories be allowed to participate only as one of the competitors without any price advantage.

CONCLUSION

It is evident that there is scope for privatisation of support facilities in Defence Services. Clothing, rations, fuels, vehicles, low and medium technology equipment, maintenance support for equipment, machineries and vehicles

common to civil industries, refits and construction of ships, training and defence R&D are some of the areas which are amenable to privatization. The guiding principle should be that any activity where equipment facility/infrastructure already exists in the private market need not be repeated exclusively for the services except in very few critical sectors. Countries all over the world have gone in for private participation in defence sector right upto the level of producing major weapon systems and there is no reason why we cannot emulate their experiences albeit with due caution. The advantages in terms of increased efficiency, professionalism, reduced man-power costs and improved teeth to tail ratio would be immense.

The associated shortcomings are - increased dependence on private sector, loss of some degree of flexibility, loss of growth potential and most importantly the relatively clean and insulated military life getting exposed to market forces and associated ills like bribery and corruption. Also there will be a lot of resistance from within the establishment as is the case while introducing any change. Adequate checks, balances, safeguards and fall back options will need to be devised and implemented. An effective integration of defence and private sector will lead to solution of many problems being faced by the soldier today. Then and then alone the soldier will be able to concentrate on his primary tasks more effectively.

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the upper middle class and more affluent families would. Not only was there a deterioration in the quality of entrants, even the numbers coming forward was so low, that a large shortage of officers remained uncovered. Such a view has again been officially repeated regularly.

All this presents an alarming picture of the shape of things to come and yet those who eventually make policy-the civil servant and the politician, unfortunately in that order do not appear to be unduly concerned. Or could be it that the problem posed to them has been wrongly worded and projected. Once when the late Mr. Jagjivan Ram, the then Defence Minister, was informed that young people from good families were not joining as Army Officers, he retorted sarcastically that pedigeree was looked for only when buying dogs, not when enrolling Army Officers. When I was the Military Adviser in the Indian High Commission in London, we decided to find out as to what was the standing of the Army in the British public's perception. I consulted various organisations including some universities and found out that on a scale of one to ten the public's sense of respect was the highest for Professors in Universities, School Teachers, Doctors and the Armed Forces. These figured generally amongst the first three, the others came lower with the politicians being fairly low. The civilian bureaucracy, incidently, hardly figured for the simple reason that in Britain it is really a faceless organisation known only in the corridors of power and not on the streets. Having rated the Army as the second or third most respected organisation, it was not as if the British youth were falling over each other to rush to the recruiting office or the Royal Commissioning Board. Similarly, having rated the Dons of Oxford and Cambridge or other Universities alongwith Scientists and Doctors as the most respected of professions, the public knew only too well that just a select few would make the grade into them. I later realised that we had asked the wrong question. Public image is one thing, being a highly acceptable job is another. The question should have been not one of finding out the public image of the Army but rather one of the choice of professions. This confusion has prevailed for long with us and does so, even now.

Mirror Mirror on the Wall

LT GEN VIJAY MADAN, PVSM, VSM, (RETD.)

The quality of officers being commissioned into the Army has been consistently deteriorating has been a refrain I have heard from the day I got commissioned in December 1954. Such an opinion prevailed in the Army well before I joined, but one dismissed it as no more than the opinion every set of officers expressed bi-annually about the Courses commissioned after them. A subject of much light hearted banter in the messes and at times even of admonishment by seniors to their juniors, this view was never more than a mock serious expression of dismay rather than of concern about the future of the Indian Army passing into dubious hands.

That something so sinister was actually in store for the Army was first voiced by the authorities in early seventies with the publicly stated declaration that the officers' cadre of the Army was no more attracting suitable youth of the country.

The findings of numerous studies and surveys showed that the Armed Forces, most certainly the Army, was the last choice among professions for young men. Neither glamourous uniforms, nor the spirit of adventure, let alone patriotism, motivated them to take on the "sacred" duty of defending the Motherland. Harsh living conditions, lack of accommodation in peace stations, short peace tenures and a poor pay package were enough disincentives towards making the Army the choice of last resort and that too for people who could not get a decent job otherwise. Whereas, at one time alumni from renowned public schools and from families of good standing flocked to serve under the colours, the situation now was entirely different. Hardly anyone, say from the Doon School would think of joining the Army as indeed none from

The Article pertains to the image of the Army Officer as reflected in society. The author has suggested measures to re-burnish it.

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Indian Infantry Divisions in World War-II

MAJOR GENERAL (RETD) CHAND N. DAS

(Part-II)

14 INDIAN DIVISION

The 14 Indian Division was raised in Quetta in 1942 and moved to the Burma front in September 1942 when the British forces were retreating into India and the Chinese retreating northward from Burma. The Arakan is separated from the rest of Burma by wide rivers and jungle clad hills. It was evacuated in 1942 and the British troops withdrew to Chittagong just across the Burmese border. A victory was badly needed to boost morale shattered by the reversals in Malaya and Burma. The Division first saw active service in Arakan that year after the impetus of the Japanese advance had expended itself. Aimed at seizing the airfield on Akyab Island originally planned as a sea-borne operation, but was abandoned as such due to lack of assault craft. The Division was to advance 150 kilometers from Cox's Bazaar down the Mayu Peninsula and a British Brigade was to capture Akyab by sea. The Division was landed in mid December 1942 from Chittagong on either side of Mayu Peninsula in an effort to seize the Peninsula (Foul Point) as a preliminary to taking Akyab. Maungdaw, the lateral road across the peninsula passing by a tunnel under the Mayu range to Buthidaung, and Buthidaung were captured. In January 1943 both Rathedaung and Donabik were reached. At this stage both sides brought in reinforcements. 14 Division now had an unmanageable nine brigades under command. The Japanese crossed the steep Mayu Ridge through thick jungle and counter attacked Rathedaung and a fierce fight ensued.

At Donabik troops came across the Japanese 'bunkers". These were dug-in, well camouflaged, impenetrable by 25 pounder shells, mutually supporting positions from which machine guns could be fired through narrow slits. Several frontal attacks during January and March failed. A Japanese force crossed the Mayu river and destroyed a brigade around Donabik and thereafter infiltrated to the coast causing utter chaos. Maungdaw and Buthidaung were abandoned and the troops were back at Cox's Bazaar after four months. Due to indifferent communications, difficult terrain and the monsoon, the operation

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CONCLUSION

Why are some nations strong and others weak? Power in International arena is defined as ability of one state to impose its will on the other or make it accept its dictates by persuasion, coercion, economic pressure, international pressure or outright military force. Elements of such national power are military power, size, population, resources, economic structure and strength, technological development, financial power, ethnic mix, social cohesiveness, stability of political system, national spirit and national vision and now the most important information power which would play its profound role in building up all other elements of national power.

We are living in the early stages of Information age. Gulf War has demonstrated how the Information Technology can play a winning role in armed conflict. Recent developments indicate that in an economic arena Information Technology is bringing in a total revolution in the way industry and society would function. For the future, concepts are evolving on how without getting involved in violent conflict it may be possible to win a war, capture economic means and profit centres of target country or effect the mind of its people and ultimately impose your will on the target country.

EFFECT OF IT ON SOCIETY

AFFECTED AREAS	ENABLING TECHNOLOGIES/DEVELOPMENTS	BENEFICIAL CHANGES/EFFECTS	VULNERABILITIES
BUSINESS INDUSTRY BANKING AND STOCK EXCHANGES	• IRADIUM SATELLITE • PERSONALIZED SERVICES • MICROSOFT NET • CUSTOMISED PRODUCTION • ROBOTIC FACTORIES • HOME SHOPPING • COMPUTER TRADING OF STOCKS	• AVAILABILITY OF LATEST INFORMATION FOR PLANNING • MOST SUITED STRATEGY • MAXIMUM PROFITS • CUSTOMER'S DELIGHT	• CONTROL OF THESE RESOURCES BY MNC OR POWERFUL STATE • MANIPULATION OF INFORMATION • QUICK EFFECTS ON NATIONAL ECONOMY • RAPID CHANGES IN OWNERSHIP • LOSS OF CONTROL BY GOVT.
INFRASTRUCTURE	• AUTOMATION OF ELECTRICAL POWER • TRANSPORT • COMMUNICATIONS INFRASTRUCTURE	IMPROVE EFFICIENCY CUSTOMER'S DELIGHT	USE OF VIRUS TO PUT OFF SYSTEM EFFECT BILLING AND CONFUSION
NEWS/ ENTERTAINMENT PUBLIC OPINION	• SATELLITE • TV • PRESS • INTERNET	• ENTERTAINMENT ON CALL INFORMATION WORLDWIDE • ACCESS TO WORLD WIDE KNOWLEDGE BASE	• WINNING OVER OF ELITE AND PUBLIC OPINION BY OUTSIDER • PROPAGATION OF CASTE, FANATIC RELIGIONS BY ENEMY OF STATE • CONTROL OF POLITICIANS • CORRUPTING LEADERSHIP • DEMORALIZING OF POPULATION
INTERNATIONAL	• GREEN PEAS • CROSS RELIGIOUS SOCIETIES • HUMAN RIGHTS • ENVIRONMENTALISM	WORLD AS ONE SOCIETY	DESTROYING OF ESTABLISHED GOVT/ SOCIETIES
TERRORIST DRUG CARTELS SMUGGLERS	• INTERNET • MOBILE PHONES	BARRIER OF TRADES MAY GO AS TRADE BY INTERNET/COMMUNICATION WOULD BE POSSIBLE	DIFFICULTY IN DEALING WITH TERRORISM OPERATION BY TERRORIST FROM HEAVEN WOULD BE POSSIBLE
WAR	CYBERWAR	NEW ENABLING TECHNOLOGIES TO FIGHT IN INFO ERA (AS STATED ABOVE)	• INFORMATION SYSTEM VULNERABLE • WILL AFFECT THE OUTCOME OF WAR

was unsuccessful, though its forward troops had actually penetrated through to Foul Point. Administrative difficulties combined to make a withdrawal inevitable which was actively followed up by the enemy.

By the end of March 1943, the Division sadly defeated by casualties and sickness handed over the front to 26 Indian Division and withdrew to India where it was reformed as a Training Division at Chindwara in erstwhile Central Province now Madhya Pradesh. It paid special attention to arrangement for supplies, communication and training in jungle warfare and Infantry tank cooperation.

It won two Victoria Crosses
Subedar Parnak Singh - 5/8 Punjab Regiment.
Jamedar Ram Swarup Singh - 2/1 Punjab Regiment.

17 Indian Division

The 17 Indian Division was raised at Ahmednagar in 1941 and was in action in Burma and Assam almost continuously from 1942 to 1945. As the Japanese advance was reaching Singapore, they also started advancing from Siam into Tennasarim in South-East Burma. The Indian forces withdrew across the river Salwan and the Sittang Bridge was the first defensive position of choice and was held by the 17 Indian Division from 16 to 23 February 1942. Due to a communication gap the bridge was demolished while the bulk of troops were still on the wrong side. A fair number managed to cross the fast flowing river but the bulk without their weapons and equipment.

The remnant of the Division put up a defence at river Pegu on 6/7 March but were forced to withdraw to Rangoon. Rangoon was surrounded by the Japanese and it soon fell.

In March 1942 the troops in Burma were reorganised into Burma Corps with General Slim as Corps Commander. The Corps was concentrated around Prome to defend the line Proma-Toungoo, but the Japanese advanced up the river Irrawady cut off the Chinese Division at Toungoo exposing the eastern flank. The position at Yenangaung was, however, held long enough to burn down its oil installations. There were heavy casualties and loss of guns near Yenangaung. Orders to withdraw into India were received on 28 April 1942 and an action was fought by the Gorkha Brigade to cover withdrawal across the Irrawady on 28 and 29 April 1942. The last action for the retreat from Burma was fought from 30 April to 2 May 1942 at Monywra.

After the withdrawl from Burma and reorganisation, the Division played

a significant role in the great defensive battle of Imphal, the seizure of Meiktila and the subsequent thrust to Rangoon. It was deployed around Tiddim for the defence of Imphal. The Japanese, however, crossed the river Manipur south of Tiddim in March 1944 and advanced northwards in a bid to isolate 17 Division. The Division started withdrawing but the Japanese cut the road further north and established themselves astride Tuitum ridge. When driven off from this position they cut the road still further north. The Division fought actions at Sakawng and Bishenpur. At Bishenpur 5 Gorkha Rifles have the distinction of winning two Victoria Crosses.

Eventually, the Division fought its way back to Imphal and fought the Imphal Battle. It then advanced to capture Marktila and after its capture operated along the Rangoon Road.

Members of the Division who were awarded the Victoria Cross:

Hav Gaje Ghale - 2nd 5th Royal Gorkha Rifles

Naik Agansing Rai - 2nd 5th Royal Gorkha rifles

Subedar Netra Bahadur Thapa - 2nd 5th Royal Gorkha Rifles

Naik Fazal Din - 7/10 Baluch Regiment

Rifleman Ganga Lama MM - 1/7 Gorkha Rifles.

19 INDIAN DIVISION

The Division was formed in India in 1941 by Major General J.C. Smyth VC, MC. The Divisional sign was a hand holding a dagger and the Division became universally known as the Dagger Division thereafter. During 1943 and 1944 it underwent frequent transformation as battle experience brought out new lessons on the organisation and training to fighting formations for the Far East. When it went into battle it was the First "Standard" Indian Division.

In battle its commander was Major General T.W. Rees, CIE, DSO, MC, a non-drinker and non-smoker, a brilliant tactician and a real leader of men with dash and personal courage of such high order that it was an embarassment to his loyal staff. To his men, General Rees became known as Pete. To his Indian troops, he was the "General Saheb Bahadur" - and never was the title "Bahadur" better earned.

It was during the winter of 1944 when the Japanese "Invade India" had been halted, the 19 Division was sent into battle. In November 1944 in boats and rafts the Division with more than a thousand vehicles and all its guns slipped across the Chindwin at Sittaung in two columns. Once across the

Issues now under debate are whether IT would be a major adjunct to military war which we are used to or would it be a totally different form of warfare. Some of these areas are still not very clear as to how cyber war will be different from normal war, i.e will it enable power to be projected in a new way? Will the target be information and knowledge instead of ground target? Whether war in the classic sense would be necessary at all in future or would IT make it possible to occupy dominating positions in trade and industry and capture profit centre without violent conflict? Still more, would IT enable a nation to effect the mind of people of the target country? Two scenes have been visualized in this regard.

* **Scenario I - Conservative Estimates** : Even the most conservative defence strategist who would present a traditional battle plan, accepts that cyber war will play significant role in the overall military strategy in the area of C^4I^2, electronic warfare, psychological warfare, attack on the information system and so on. Anybody with an information balance in his favour will be the winner.

* **Scenario 2 - Hold No Base Estimates** : IT would help a powerful nation even during peace time to control the target country's economy particularly banking and stock exchange and other profit centres, gain knowledge of the weakness of its leadership, exploit TV, Radio and Press to demoralize the target nation and dominate it by touting its own way of life or change its value system and by such means totally eliminate the need for a violent military war. It would also be able to create a military and information based powerful deterrence and if deterrence fails fight and win the war decisively leveraging IT.

Whatever be the military scenario; IT will have profound effect on society. Some of these have been included in the table attached.

computer system particularly the port and cable to the monitor and printer produce spurious radiation which can be monitored at a distance using sensitive receiver. The data being processed can be reconstructed and reproduced for information gathering. Thus without the knowledge of user, information being lost is one of "the greatest danger of loss of intelligence when no one can even visualise the source of its leakage."

* **Loss of Information due to insiders :** Large amount of information may be lost by insider, personnel working in the systems or involved in its repairs. Procedures and methods have to be designed to overcome such problem.

FUTURE WARS IN INFORMATION AGE

Everyone in defence community agrees on the importance of IT in a future war. However, new thoughts and theories are emerging. IT will totally change the very nature of war and the area of battlefield, now being called battle space. A new form of warfare called Cyber War or Netwar or Infowar, is being talked about. To avoid symantic confusion these terms need clarification at the outset.

CYBER WAR

	NET WAR	INFO WAR
Pertains to	Society level conflicts.	Military level conflicts.
Effects	Target population and their thinking.	The Information balance by denying the enemy use of electro magnetic media and having a transparency of battlefield.
Focus on	Public or elite opinion or both	C^3I system, communications, computer systems, surveillance devices.

Chindwin, the Division was deployed in two long range penetration groups - each as a self-contained fighting force, supplied by air, making its own routes across country and leaving no line of communication open in the rear. Japanese encountered en route were liquidated with expedition. The watchword was "Pursue the Enemy".

The first column cutting through their way over 150 miles captured Pinlebu on 16 December. Meanwhile, the other column after a march of 150 miles captured Banmauk on 18 December to link up with the 36 British Division. After that the Division advanced towards Shwabo and its first battle was at Leiktu which lasted five days. The road was then opened for the advance on Shwabo and Pinlebu; Pinde and Gada were taken in quick succession. The Division having covered more than 400 miles captured Shwabo after a stiff fight.

Within 24 hours of the fall of Shwabo, General Rees had sent patrols across the Irrawady 20 miles to the east to locate suitable crossing places. The first crossing was at Thabeikkgin and the Division was established at Kyaukmyaung. Inspite of fierce reaction by the Japanese the bridgehead was held by troops who had fought so gallantly for 20 days. It was not until early February that the Kabnet area was eventually cleared. Pear Hill was repeatedly attacked by the enemy but it was held. On Minban Taung there was a fierce fight.

With the support of tanks the push was made down the river from Kula to Singun. The effort to hold advance on the road to Mandalay was a failure and cost the Japanese more lives. Inspite of the difficult terrain and "hard fought battles" Madaya was captured. Meanwhile, the main force advanced towards Mandalay and surrounded it. Fort Dufferin was captured and soon the two flags, the Union Jack and the Dagger Divisional flag which General Rees had been carrying about ready for the occasion, were hoisted.

Soon after Maymyo was captured. With the fall of Mandalay the Japanese main line of defence on Irrawady was turned. At Tomosko thousand shells from the Field Regiment resulted in the total slaughter of the enemy. At Megingyan more than 2000 Japanese were encircled. The Division still in pursuit in the Shai Hills captured Thezre and Hlaing Det.

While British forces occupied Rangoon the Division fought some of the toughest battles for Toungov-Mawchi. Kalaw and Manpadet were captured.

Finally in July 1945 when the last two Japanese Divisions west of the River Sittang attempted to escape, the Division in close cooperation with the

17 Indian Division inflicted a most crushing defeat on the Japanese on the banks of Sittang. "The Cease Fire" found the Division driving the enemy back along the Mawchi Hill road through thick jungle towards Siam.

20 INDIAN DIVISION

The 20 Indian Division was raised in Bangalore in 1942 under Major General Douglas Gracey. It carried out extensive training in jungle war in Ceylon solely for the war in Burma. The Division's order of battle then showed the classic constitution of an Indian Division - one British, one Indian and one Gorkha battalion to a brigade. General Gracey had personal concern for the welfare of his troops. "The Jawans" he knew well, the Gurkha "Sathi" even better, for he himself was from the 1st Gorkha Rifles. During a pitched battle in the Irrawaddy valley one Gorkha battalion went into action with the cry "the General's Gorkha charge"

In early 1944 when patrolling and brief action on outpost lines was the general pattern of the war in Burma, the 20 Indian Division was moving down through the jungle country to the Chindwin and beyond and into the Kabaw Valley seeking out the enemy, to destroy him.

These early days also brought the award of a Victoria Cross to Lieut. Alan George Harwood in a three day action at Kyaukchaw which cost him his life while leading the final assault.

The 20 Division had attained early mastery over the enemy in the Kabaw Valley. They were, however, withdrawn to defend the southern half of the Imphal plain. Their withdrawal was to be a fighting one. The first tank versus tank battle in Burma took place during this withdrawl. Successive actions were fought which delayed and took toll of the enemy at Moreh, Shark, Nippon Peak and Sita Ridge. Bitter battles were fought on the Shenam Saddle, "Brigade Hill", "Crete" and "Scraggy". In the defence of Palel airfield the Division prevented the Japanese from bringing his guns forward to get within range of it. Before it was pulled out, the Division had killed 2,500 Japanese in the fighting from Tamu to the Sheman Saddle.

On the Ukhrul road the Division held the Saddle overlooking the Thoubal river and by an encircling movement cut the enemy line of withdrawal for Kanglatongbi area. The enemy made desperate attempts to escape but were practically annihilated.

In November 1944 the Division went into its second spell of fighting. It established the 14 Army's first bridgehead across the Chindwin at Maukkadaw.

ninety six percent of intrusion went unnoticed and those detected only five percent were reported.

It is not only the computer systems which are vulnerable to access by unauthorised persons but the whole information system is vulnerable in many other ways as indicated below :-

* **Electronic Warfare** : Each country spends considerable amount of money and resources in gathering intelligence through electronic monitoring of target country's systems. National Security Agency (NSA) involved in this task is the largest of USA's intelligence agencies. Thus at all times, communication systems of a country are subject to monitoring and information gathering. Armed forces have on the other hand acquired, at considerable costs, jamming and deception systems to deny the enemy the use of his electronic media or misguide him. Thus the systems are vulnerable to denial of its use at critical times.

* **Computer Virus** : There are nearly 1600 known types of computer virus which spoil computer software data files and programmes. Every day new types of virus are being invented to overcome the anti-dote designed. Some of these virus can play havoc with the information system during war. If used as a weapon, these can provide commander with unparalleled capabilities due to their unique characteristics. Some of these characteristics are :-

* Computer virus are contagious giving it widespread effect. This allows indirect targeting of victims by initially entering at the weakest element in the enemy's defence and slowly finding its way to the real target. Computer virus are covert with victim user being unaware of their presence and striking at critical time. This is known as Logic Bomb.

* Size of virus programme is surprisingly small. It is also versatile in the sense that it does not require information about the programme to be infected.

* **Tempest - (Total Electronic and Mechanical Protection against Emission of Spurious Transmission)** : Each

TRAINING

Exploitation of IT is feasible only if the Armed Forces have been fully trained in its use. IT power is also being employed for training of fighter in their basic trades. It has a major role in some of the following areas :-

* Training in use of computer and computer software by using self training software packages.
* Training of fighters economically by use of simulators from a simple rifle training simulator to simulator for training of jet pilot or AD gunner.
* Training of Commander in manoeuvre by computerised war games or still more, creating a synthetic theatre of war (STOW) by employing virtual realities, which would overcome the problem of cost in actual use of troops and lack of realism in simulation.

FIELD EXERCISE	SIMULATION
* Realistic	* Approximation
* Costly	* Economical
* Limited in scope	* Flexible
* Live operators	* Lacks human factor

STOW

SECURITY OF INFORMATION SYSTEM

Control and security of information domain has become critical, as once we start using information we become dependent upon it and it is this dependence which makes us vulnerable as information is vulnerable.

USA's Defence Information Security Agency (DISA) testing the vulnerability of military computer systems found that about 88 percent of all defence computer systems could by penetrated,

After a sharp action at Budalin there were only brief encounters before the final assault at Monywa which was captured without any opposition. In the advance towards Mandalay it captured Myinmu. The Irrawady bridgehead battle lasted nearly a month but inspite of stiff opposition and counter attacks by the Japanese, the Division held its position. Jamedar Prakash Singh of the 13 Frontier Force Rifles won the Divisional second Victoria Cross making the supreme sacrifice.

In early March, Talingon was captured after a week long battle after which the breakout to east began and swiftly capturing Myotha on the Saging-Myingyan railway, it cut the main Mandalay-Rangoon road to Bilin. After the battle of Kyaukse, Magwe was captured cutting the only MT road to Prome. That forced the enemy to evacuate the airfield hurriedly abandoning his MT and guns. Allanmyo and Bwetgyi Chaung were captured and Prome was entered with slight opposition on 2 May and Shwedaung the next day. During June the Division took up its final position along the main Rangoon road from Gyobingauk to Hmawbi.

In September the Division moved by air and sea to French Indo China with the task of concentrating and disarming the 70,000 Japanese troops there.

In December one brigade left for Borneo and another for Mecassar. Subsequently, the third brigade returned to Ranchi to disband and so a famous fighting formation was broken up.

23 INDIAN DIVISION

The 23 Indian Division was formed at Ranchi in January 1942 and first went into action on the borders of Burma and Assam. In June 1942 the first patrolling started from Imphal and formed defensive positions to cover the withdrawal of General Alexander's Army. In November 1942 it was concentrated in the Kabaw Valley and operated up to Chindwin.

When Wingate's group set out, men from the Division escorted them 20 miles beyond Chindwin, with a diversion attack on Okkan near Kalemyo. Constant patrolling by the battalions and sudden small attacks in the jungle distracted the enemy's attention from Wingate's exhausted men. Later, when Wingate returned; the Division covered their retreat.

In November 1943, the Division had been holding the sector of the Assam frontier over 100 miles long for more than 18 months. While withdrawing for a rest, a battalion was sent to assist a battalion of the 17 Division which was being heavily pressed.

During the rest, it got valuable training and then moved to Sittaung to make another diversion for the second expedition by Wingate in Northern Burma.

To meet the Japanese attack in India 17 and 20 Divisions were withdrawn from the Kabaw Valley nearer their base in Imphal as it had been decided by General Slim, the Commander, that for the first time we should fight the Japanese when the precarious line of communication was behind them and not behind us.

The enemy's first move in early March 1944 was a wide encircling movement through Chin Hills threatening to cut 17 Division's supply line. To meet the threat, a brigade was sent into Chin Hills. When the forward troops of the brigade were themselves cut off by the enemy, the rest of the Division started fighting from Imphal to contact the 17 Division. There followed one of the bloodiest fights in the campaign and the Division suffered 250 casualties. The contact with the 17 Division was, however, established and a brigade covered the withdrawal of the 17 Division to Imphal. Subsequently, it was engaged in bitter and prolonged fighting in the defence of Imphal against the main thrust of Japanese armour and artillery. 50 Indian Parachute Brigade which had joined the Division was cut off at Sangshek, but delayed advance of the Japanese for several days and fought its way out. General Slim wrote later, "the enemy by constantly attacking and reinforcing failure, fell into our hands and it was at this period especially round Imphal that the process of wearing him out began".

When Imphal was cut off by the Japanese, the Division attacked the 15 Japanese Division on the Ukhrul road and cleared the hills dominating the area. It finally opened the road on 22 April. In the Battle of Lam-nu it again surprised the enemy and captured the position.

The Division relieved the 20 Division at Shenam and for almost three months every single battalion of the Division was involved in heavy but successful fighting on the hills around. One of the most daring attacks of the campaign took place when "Gibralter Hill" was taken by the enemy but finally in a counter attack recaptured with Artillery support and it captured Tamu. Subsequently, it was engaged in bitter and prolonged fighting and took part in the initial stages of the offensive and advanced back into Burma. It had suffered 2,900 casualties.

In 1945 the Division having trained in combined operations embarked for Malaya arriving at the time of the Japanese surrender. Thereafter, it moved to Java with the formidable task of restraining law and

IMPACT OF IT IN OTHER AREAS OF WAR FIGHTING CAPABILITIES

C^4I^2 systems are force multipliers but they cannot multiply a zero force. The hard kill weapons are still necessary to deter or destroy an enemy. IT has enhanced the weapon capabilities which were beyond imagination a few years earlier. Some of these are explained in succeeding paragraphs.

Strike Capability : Weapon system today have unprecedented precision fire power, made possible by guidance system. Tomahawk missile has capability to hit a building or room in a building at a distance of 1200 kms using its advance terrain contour matching system to travel to the area of target and thereafter switching on to digital scene matching correlator to hit the pin-point target. Guidance system is 60 per cent of the cost of the missile.

Mobility : Mobility on battlefield is achieved not only by better mechanical vehicle but providing these with navigation aids like Gyro Positioning System (GPS), night vision devices, soil conditions (based on satellite imagery) etc. Mobility is a winning factor in war.

Surveillance and Intelligence : Satellite, Aircraft, RPV, Radars are likely to provide the commanders with total transparency in battlefield, at the same time EW jammers would deny the enemy the information of the battle situation and the ability to communicate with his own force. Technology development like Coupled Devices (CCD), Infrared (IR), Electro Optical Devices (EOD) are enhancing the power of surveillance. The use of powerful computers required to synthesise the data from various sensors by appropriate software, would be necessary to produce the required information.

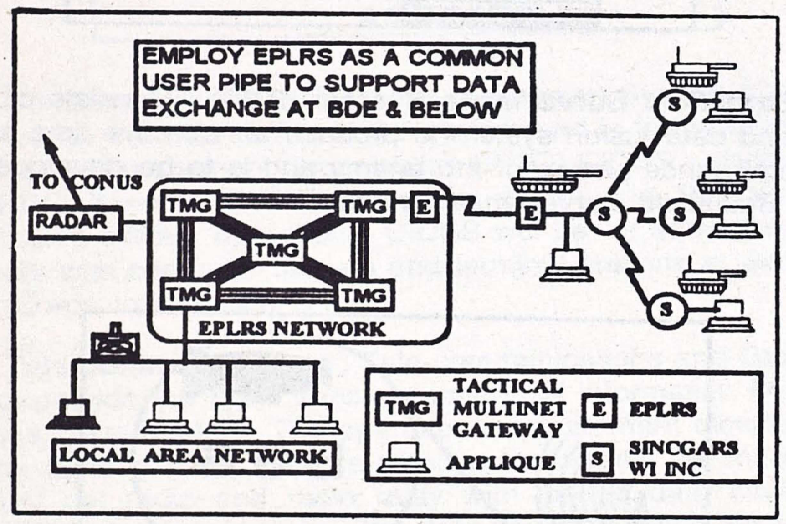
Air Defence : Air defence in almost all countries heavily depends upon automation i.e in area of detection of air missile attack, laying of own guns and AD missiles and their guidance to the incoming target is based on automatic data processing. Defence against Scud by Patriots was a typical example of these systems.

Operational Air Support System : To integrate air power in ground operation.

Air Defence Control and Reporting System (ADC&R) : Forward area Air Defence Command and Control System for air defence against enemy's aircraft and missiles and is to be developed by Directorate of Air Defence Artillery.

C³I Systems At Fighting Level

At the lower fighting level of Brigade and below, problem of automation increase manifold as environment is not congenial.



Troops are mobile, involved in violent fighting, situation is always fluid and media of communication is basically radio. Data communications have to be provided on radio using internet controller; tactical multinet gateway and automatic network manager.

Efforts are being made to provide a seamless data communication from highest level to fighting level so as to employ the total synergic power of the Army to defeat an enemy.

order and rescuing internees. This involved fierce street fighting which continued for a year after the war with Japan was over. This evoked a special tribute from the Dutch Force Commander in praise of the unsurpassed gallantry and self sacrifice of the troops which had saved so many men, women and children from death and starvation. The Division's casualties in Java were more than 1,300. The Division returned to India in 1947 to disband the same year.

25 Indian Division

The 25 Indian Division was raised in South India in August 1942 and given the operational role of meeting any attempted Japanese invasion, while at the same time, training intensively in jungle warfare.

The Division under 15 Corps first saw action in Arakan in March 1944 where it held and enlarged the Maungdaw Base. It had advanced down the Mayu valley in the latter part of 1944 retaking Buthidaung in early January 1945 and entered Akyab Island which had eluded the 14 Indian Division two years earlier, but was now found to have been evacuated by the Japanese. It was decided to carry out sea borne landings to get round successive enemy positions as the Japanese had done in Malaya in 1941 and to prevent the retreating Japanese from escaping. Landing by 25 Division at Ramree Island took place in the later part of January 1945. Village Kangaw near the coast was strongly defended but the commandos established a beach-head on which a brigade was landed. The position was held against counter-attacks from January to mid February.

Landings were also made at Ru-ywa to open up the An Pass and then breakout to outflank the Japanese, provide a route to the Irrawaddy river and threaten Prome. Heavy counter-attacks by the Japanese at Ru-Ywa were repulsed. With 3 Commando Brigade under command, it made a series of successful seaborne attacks down the coast supported by sloops of the Royal Indian Navy, winning four Victoria Crosses.

The Division was withdrawn to South India in April 1945 to prepare for the invasion of Malaya being chosen for the assault landing role. Although hostilities then ceased, the operation proceeded as planned and it was the first formation to land in Malaya occupying the capital Kuala Lumpur and then accepting the surrender of the Japanese Army.

26 Indian Division

The 26 Indian Division was raised in 1942 from the original Calcutta

Division and for the next two years was almost continuously in action in the Arakan, the south west Burma front. During 1942/43 the Division took part in the strenuous efforts made to reach Akyab. During March, when the 14 Division was sadly depleted by casualties and sickness, it took over the Front. Early in 1944 it moved to the relief of the 7 Indian Division, invested by the Japanese in their "Admin Box" at the Ngakyedauk Pass. The Japanese had established themselves on the eastern side of the pass and had surrounded the "Admin Box". It was cleared of the Japanese by joint effort after a month long battle. One of the Divisions's two Victoria Crosses was won during the bitter fighting at this critical stage of the Arakan campaign. In January 1945 the Division took part with the 25 Division in a series of swift leapfrog landings down the coast to capture Akyab and Ramree Island. Preperations followed for the long-awaited sea-borne invasion and capture of Rangoon, which in the event was accomplished without enemy opposition on 2 May 1945.

1946 saw the Division engaged in operation in Java and Sumatra prior to its eventual disbandment.

34 INDIAN DIVISION

The 34 Indian Division was raised in 1942 for the defence of Ceylon. There was an increasing Japanese thrust and the Division prepared a number of defences on the beaches and inland for the defence of the island. The Japanese naval crafts managed to reach the proximity of the island to shell it on one occasion but no damage was done and the troops suffered no casualties.

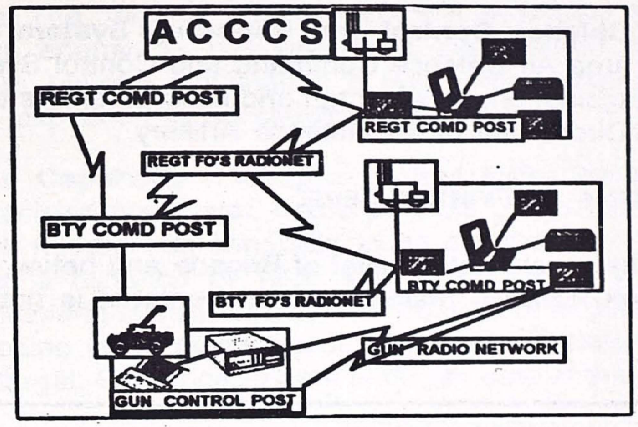
When Lord Mountbatten established his headquarters in Ceylon, the defence of the island was further strengthened.

1 BURMA DIVISION

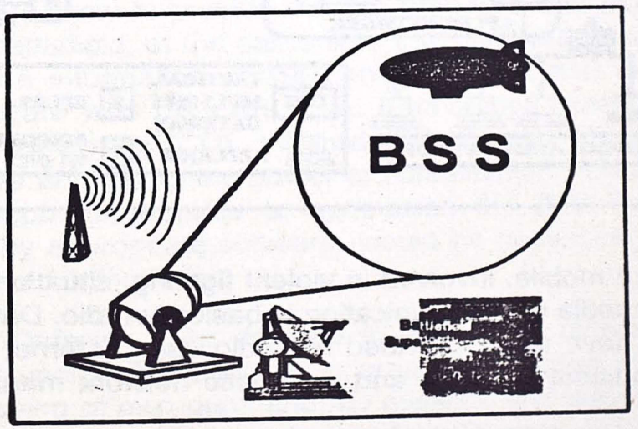
(later designated 39 Indian Division)

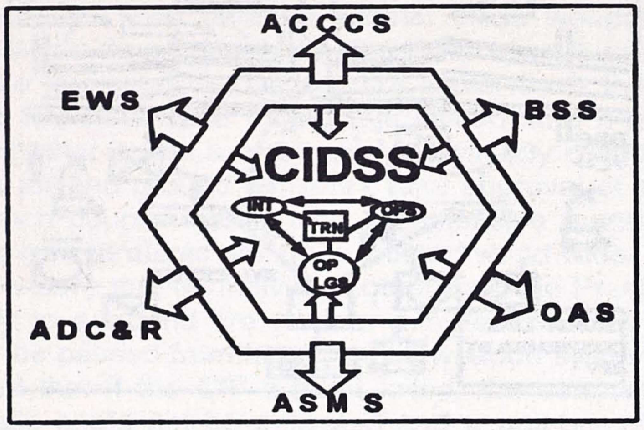
The Division was formed in Burma on 1 July 1941. At the time of the Japanese invasion in February 1942 the Division was short of artillery, Engineers, signals, Medical and transport.

After 3½ months of continuous fighting delaying actions, on orders for withdrawal in April 1942, tired and exhausted troops began their retreat over 1,400 kilometers of mountains and malarial jungle with the enemy in hot pursuit. For crossing the Chindwin at Kalewa by streamers the order of priority was men, guns and four wheeled vehicles. All other items were either burnt



Battlefield Surveillance System (BSS) : Consists of sensors and data fusion system to produce an effective time sensitive intelligence picture of the enemy and is to be developed by PMO Battlefield Surveillance Systems.





Command Information Decision Support System (CIDSS): This will be the hub centre of C³I system and is to be developed by Project Management Organisation (PMO) CIDSS with the help of DRDO. It would assist Commander in Planning, Directing and Controlling military operations. CIDSS will be an integrated data network with computer servers and terminal stations at each HQ from Corps to Battalion HQ.

Tele-communications : Tele-communications and Data networks provide the main transport means of information between various Headquarters. The operational requirement dictates that at the fighting level the tele-communication will be mainly on combat net radio and radio relay with limited data capability. There is also a need to provide data communication from Army Headquarters down to Battalion over varied type of media like microwaves, setellite, radio and line and with varying data rates, which poses a serious problem to the system design.

Artillery Combat Command and Control System (ACCCS) : The system is being developed by PMO ACCCS and DRDO. It is a computer based data network to help in enhancing the response time, first salvo effect and force multiplying effect of artillery fire.

or made unserviceable before crossing. Of the 100,000 Indian settlers who came with the retreating army, barely half made it to India, the rest having perished on the way. On 12 May 1942; 30 kilometers out of Kalewa; Indian Army lorries met them.

The Division finally withdrew to Shillong where it was re-designated 39 Indian Division and assumed a training role.

EPILOGUE

THE WAR CHANGED THE WORLD

Statesmen concerned with peace treaties in 1945, were fully alive to the danger of repeating the errors of World War One's peace treaties. But they were faced with problems of immense complexity. In this war strategy, the Allies in the West had kept Western Germany under their occupation and had allowed the Russians to occupy Eastern Europe - a step which led inexorably to communist domination of governments in Eastern Europe after the war.

Beyond this, the war had changed completely the international status of nations regarded as "great powers". Germany and Japan lost this status in defeat. Britain and France lost theirs inspite of victory.

From 1945 onwards, world affairs were destined to be dominated for many years by two super powers, the United States and the Soviet Union.

WORLD WAR II - 1939-45

Theatre Honour - Abyssinia 1940-41

Battle Honours

Gallabat	Ad Teclesan
Agordat	Massawa
Barentu	Amba Alagi
Keren	Berbera
Keren-Asmara Road	

Theatre Honour - British Somaliland

Theatre Honour - North Africa 1940-43

Battle Honours

Sidi Barrani	The Cauldron
El Mechili	The Kennels

Defence of Tobruk
Sidi Suleiman
Tobruk 1941
Omars
Gubi II
Relief of Tobruk 1941
Alem Hamza
Gazala
Tobruk 1942
Point 171
Mersa Matruh
Defence of El Alamein Line
Deir el Shein
Ruweisat Ridge
El Alamein
Matmata Hills
Akarit
Djebel el Meida
Djebel Graci
Ragobet Souissi

Theatre Honour - South East Asia 1941-42

Battle Honour

Hong Kong

Theatre Honour - Iraq 1941

Theatre Honour - Syria 1941

Battle Honour

Damascus

Theatre Honour - Malaya 1941-42

Battle Honours

North Malaya
Kota Bahru
Jitra
Central Malaya
Ipoh
Kuantan
Kampar
Slim River
the Muar
Niyor
Singapore Island

Theatre Honour - Italy 1943-45

Battle Honours

The Sangro
Caldari
Cassino I
Monastry Hill
Castle Hill
Hangman Hill
Cassino II
Sant Angelo In Teodic
Tavoleto
Pratelle Pass
Coriano
Alpe di Vitigliano
Femmina Morta
Poggio San Giovanni
San Marino
Santarcangelo

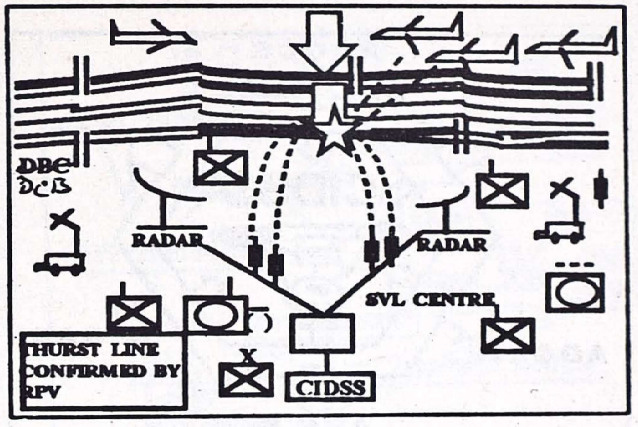


Diagram above represents a typical border area along Indo-Pak border where both sides have built elaborate defences based on ditch cum bund. Success of the attacker would depend upon how speedily he can breach these defences and get his forces across. On the other hand defender's aim would be to prevent the attacker breaching defences by moving his reserve to the area under attack before the attacker crosses the defences.

In this scenario, if the defender has his sensors like Battle-field Surveillance Radar (BFSR) and Electronic Warfare (EW) deployed, the BFSR can indicate the likely area of enemy's attack by monitoring his movement prior to his closing on the defences and similarly EW sensor can judge the area of his attack by direction finding his electronic emitter and monitoring his trans-mission. Remotely Piloted Vehicle (RPV) and air reconnaissance can further confirm the likely area of attack. Thus by this advance information, defender can move his guns, call for air support and move his reserve to area of attack well in time and defeat the attacker at his weakest movement ie crossing of ditch cum bund. Thus it would help a smaller force to defeat a large attacking force and C^4I^2 providing the force multiplier effect.

Tactical systems consisting of the following sub systems are planned to be acquired for Indian Army :-

STRATEGIC SYSTEMS

These encompass control of strategic weapon systems and strategic forces as also defence against these weapons. Such systems were first developed during Cold War when it was realised that a missile launched by one country could reach the other in half hour to two hours and during this limited time it had to be confirmed whether it was a real missile attack (By collecting data from space, air and ground sensors), take approval of the President to launch counter strike, take all defensive measures and inform one's own strategic weapons located world wide. Systems has to also ensure that no individual other than the President has the authority to arm and fire nuclear missile and thus the final code has to be passed from him to these weapon systems. It can be visualised that if the C^4I^2 system failed, the defence against enemy missile could not be activated and a number of counter attack missiles would get destroyed on the ground itself before being launched. C^4I^2 systems thus has become as essential as the weapon systems and are known as force multipliers.

If India has to occupy its rightful place in the communities of nations, it would have to acquire such a national level C^4I^2 system so that not only defence forces but entire nations' resources could be utilised in a synergic manner to be directed against an aggressor.

OPERATIONAL AND TACTICAL SYSTEMS

At tactical level the fog of war is thickest, intensity and violence of operations at its peak and need for correct decision making most critical. Future wars are also likely to be fought against a nuclear backdrop in fairly intense high technology environments. Operations will be highly mobile with fast changing situations. Decision making will become time sensitive in SCORE loop in the above scenario, requiring faster acquisition, processing and retrieval of information for planning, monitoring , threat analysis and assessment of situations. C^4I^2 system in such scenarios become a force multiplier as explained from a situation on a typical border scenario.

Rocca d'Arce
Ripa Ridge
Trestina
Monte Della Gorgace
Monte Cedrone
Citta Di Castello
Advance to Florence
Il Castello
Gothic Line
Monte Cavalo
San Martino Sogliano
Monte Farneto
Monte Cavallo
Monte San Bartolo
Casa Bettini
The Senio
Senio-Flood Bank
Gaina Crossing
Idice Bridgehead

Theatre Honour - Greece 1944-45

Theatre Honour - Burma 1942-45

Sittang 1942
Pegu 1942
Yenangyaung 1942
Kyaukse 1942
Monywa 1942
Rathedaung
Donabik
Stockades
Chindits 1944
Mogaung
North Arakan
Buthidaung
Razabil
Defence of Sinzweya
Ngakyedauk Pass
Point 551
Ramree
Kangaw
Ru-ywa
Taungup
Imphal
Tuitum
Sangshak
Sakawng
Tamu Road
Shenam Pass
Nungshigum
Litan
Bishenpur
Aradura
Ukhrul
Tengnoupal
Tiddim Road
Tonzang
Kennedy Peak
Mawlaik
Kalewa
Haka
Gangaw
Shwebo
Shwell
Kyaukmyaung Bridgehead
Myinmu Bridgehead
Nyarengu Bridgehead
Singu
Taungtha
Capture of Meiktila
Defence of Meiktila
Meiktila
Mandlay
Fort Dufferin
Ava
Kyaukse
Letse
Mount Popa
Magwe
Rangoon Road
Pyabwe

Kanglatongbi	Pyinmana
Kohima	Toungoo
Jessami	Pegu 1945
Defence of Kohima	Shandatgyi
Relief of Kohima	Kama
Jail Hill	The Irrawaddy
Naga Village	Sittang 1945

INDIAN ARMY AWARDS IN WORLD WAR II

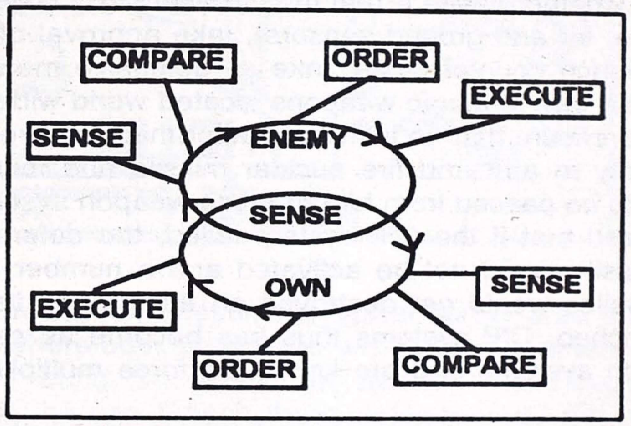
Nearly 6,300 awards were earned by the Indian Army for gallantry and meritorious service during World War II. Awards for gallantry alone totalled about 4,800. They include 31 Victoria Crosses, four George Crosses, 252 Distinguished Service Orders, 347 Indian Order of Merit and 1,311 Military Crosses.

The Infantry earned about 4,000 awards, including 29 Victoria Crosses, one George Cross, 446 Distinguished Service Orders, while Engineers and Service Corps had about 350 awards each to their credit. Of the 300 awards won by the Armoured Corps 21 were Distinguished Service Orders and 88 were Military Crosses. The invaluable and gallant service rendered by army doctors to the front line troops earned the Medical Service 140 awards for gallantry alone, among them eight Distinguished Service Orders and 70 Military Crosses. Over 100 awards were won by the Signal Corps which included one Distinguished Service Order and eight Military Crosses. The Artillery won 100 awards which include one Victoria Cross, six Distinguished Service Order and 38 Military Crosses.

VICTORIA CROSS

		Division
1.	2/Lt Premindra Singh Bhagat	5
2.	Subedar Richpal Ram (Pos)	4
3.	Lt Col A.E. Cumming, MC	9
4.	Havildar Parkash Singh	14
5.	Subedar Lalbahadur Thapa	4
6.	Company Havildar Major Chhelu Ram	4
7.	Havildar Gaje Ghale	17
8.	Naik Nand Singh	7
9.	Jemadar Abdul Hafiz	5
10.	Sepoy Kamal Ram	8
11.	Capt Michael Allmand	3
12.	Rifleman Ganju Lama MM	17
13.	Subedar Netrabahadur Thapa (Pos)	17

constitutes four functions i.e Sense, Compare, Order and Execute called SCORE loop and also called OODA loop ie Observe, Orient, Decide and Act. These function both for the enemy and own forces interact in a time sensitive loop as explained in figure I below:-



The lessons gained from military history indicate that the key to military victory lies (regardless of military size of the opposing forces) in remaining ahead of the enemy in time sensitive SCORE loop of (C^4I^2 process).

If a defending force or weapon system can, with some accuracy and sufficient warning, find out where the attacker is or his future course of action would be, it would be easier to defeat him by occupying position of advantage or by massing a superior force at the point of decision.

Since war covers a wide spectrum of activities, devising a single C^4I^2 system to cover all activities at all levels will be a highly complex task. Therefore, the world over, these systems have been divided into two or three levels ie Strategic, Operational and Tactical level (or last two levels are combined). Each level also has a number of sub-systems to cover various activities.

areas, from permanent snow covered hills of Siachen Glacier to hot deserts of Rajasthan and from jungles of East to built up areas of metropolitan cities. It has a hierarchical structure consisting of six layers from lowest unit called Regiment or Battalion to Brigade, Division, Corps and Command and Army Headquarters. Whereas all planning for recruitment of officers and men and procurement of weapon and stores is done at Army Headquarters and Ministry of Defence, the employment of these is at unit level.

To manage such a complex corporate functioning is difficult. It is the use of appropriate hardware at various levels -- mainframe, mini, PC, connected software, communication and networking -- which has helped it to tackle this problem. In future enterprise, networking would further enhance this capability. Similarly, use of IT in inventory management would save crores of rupees.

FIGHTING A FUTURE WAR-COMMAND, CONTROL, COMMUNICATION, CO-ORDINATION, INFORMATION AND INTEROPERABLE (C^4I^2) SYSTEM.

A commander has always played a dominating role in war. In olden times the king had to be visible to lead his Army and if the king fell his army ran away, the battle was lost. With the coming of communication in the form of flags, drums and horse mounted couriers the communications gave the ruler longer warning time and helped him to control the battle from a safe distance. It also helped him keep in touch with his out-lying post and increased his span of control. Telephone and radio further enhanced this capability and made it possible to fight World War I and II on global scale. Invention of nuclear weapons and missiles have further shortened the warning period to few hours and lead to the development of automated Command, Control, Communication, Coordination, Information and Interoperable (C^4I^2) system.

It is necessary to understand this much used but less understood term-C^4I^2. "C^4I^2 system consists of facilities, equipment, communication, procedures and personnel essential to a commander for planning, directing and controlling operations of assigned force pursuant to the mission assigned". Basically (C^4I^2)

14.	Naik Agansing Rai	17
15.	Maj Frank Gerald Blaker MC (Pos)	26
16.	Naik Yeshwant Ghadge (Pos)	10
17.	Rifleman Tulbahadur Pun	3
18.	Rifleman Sher Bahadur Thapa	4
19.	Jamedar Ram Sarup Singh (Pos)	14
20.	Rifleman Thaman Gurung (Pos)	8
21.	Sepoy Bhandari Ram	25
22.	Havildar Umrao Singh	25
23.	L/Naik Sher Shah (Pos)	25
24.	Jamedar Parkash Singh (Pos)	20
25.	Naik Gian Singh	7
26.	Naik Fazal Din	17
27.	Rifleman Bhanbhagta Gurung	25
28.	Lieut Karamjeet Singh Judge	7
29.	Sepoy Namdeo Jadhao	8
30.	Sepoy Ali Haider	7
31.	Rifleman Lachhiman Gurung	7

NOT TO BE FORGOTTEN

Within the limits imposed by time and space it has not been possible to record the names and service of many units of both the British and Indian Armies who gave both gallant and invaluable support to the Indian Divisions, in action, garrison duties and in the training role. In action many came from Corps and Army sources, who in themselves deserve a special mention, as also do those who served in the less spectacular role of L of C troops.

The Royal Navy and the Royal Air Force, together with the Royal Indian Navy and the Royal Indian Air Force were as always in evidence, ever providing outstanding service and support in their respective elements.

Finally, within the Divisional establishment, many of the smaller units have unavoidably been deprived of recognition. Their service is not forgotten as all played their parts with the same flair and efficiency that characterised the Divisions to whom they belonged.

(Concluded)

Golden Jubilee Seminar

DEFENCE SERVICES STAFF COLLEGE

WELLINGTON

GENERAL

The Defence Services Staff College, Wellington, will be celebrating its Golden Jubilee in October 1997. As part of its celebrations a two day seminar will be organised. The subject of the seminar is :-

"Command and Staff Challenges in the 21st Century".

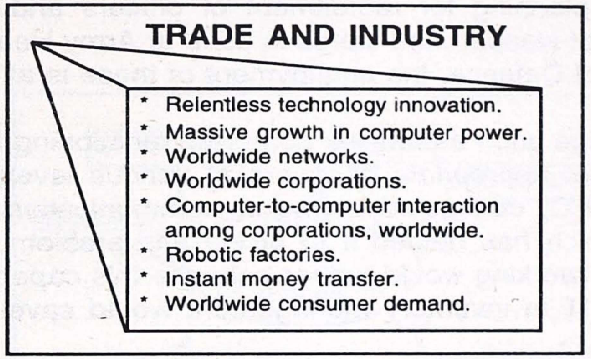
"There have been profound changes in the last two decades of the Twentieth Century which have altered our perceptions of the nature of future conflict and the mechanics of its resolution. There has also been a sea-change in the way nations perceive themselves and each other in the international system. The military will continue to be an important and critical element of national power. However, the Indian Military Establishment requires creative adaptation, fundamental changes and determinism to be able to respond effectively to the nation's needs in the future. These will pose tremendous challenges to the Command and Staff at all levels." Some questions that may assist in crystallising issues for discussion are delineated in the following sections.

MILITARY-STRATEGIC ISSUES

(a) Low Intensity Conflict emerged as the primal form of war in the post war period. Most military experts feel that this trend will continue in the 21st Century. An eminent band of Social Scientists and Futurologists, however, have been warning of the possibilities of the outbreak of high intensity conflicts in the next millennium. This could be premised upon a fierce competition for the control of the world's dwindling oil reserves. Identifying the primal form of conflict for the next century is vital, for it will have an enormous bearing upon the nature of our military organisations, their armament patterns, tactics and training.

(b) While the self-assessed capability of the Services has had some effect in shaping our external environment and actions in the past, should this principle be also extended to the sphere of the nature and scope of internal security operations itself? A bulk of our internal threats will arise from the failure of government to address and appease all expectations

It is necessary to understand that we are still in the early stages of one of history's greatest transitions, which we are witnessing. The changes that are likely to emerge in a decade's time are mind boggling and even difficult to visualize.



JAMES MARTIN

The defence forces cannot remain isolated from this change. To have a winning chance, armies of the future would also have to change from industrial age organisation to knowledge and capability based - armies by leveraging information technologies to their advantage. It is gaining information balance, its sharing followed by a synergic action, which will give an edge in a conflict. Accordingly, present organisations around weapon system would get transformed to be built around information. In fact, the US Army is already undergoing this change in a massive way to so called Force XXI (force of 21st Century). War covers a very wide spectrum of activities. Information Technology (IT) has a capability enhancing role in each of these activities.

IT AND PEACE TIME MANAGEMENT OF ARMY AS AN ENTERPRISE

We can take the example of Indian Army. It is the third largest Army in the world, consisting of more than 40,000 officers and a million men, more than 50,000 crores worth of inventory including 11,50,000 tracked and wheeled vehicles and half a million other items in the inventory. It is located throughout the length and breadth of the country and is required to fight in varied

Impact of Information Technology A New Dimension

MAJ GEN GURBAKSH SINGH, VSM (RETD)

INTRODUCTION

From time immemorial mankind has had a fetish for warfare and it continues till today. Only the methods and means are being altered by time and technology. Technology has not only altered the way of warfare but its employment has been a key factor in establishment of military power. Use of gun power helped Babar to establish Mughal rule in India which lasted for 400 years and it enabled England to establish the largest ever world empire. Coming of industrial age led to large scale attrition wars, first tank and then aircraft dominating the battle field. World is now entering the information age and Gulf War has demonstrated how winning of the information war would give an overwhelming advantage in military balance. Therefore, in future, manipulation and winning of an information balance would become a key factor to victory and national power.

It is part of history that benefits of technology are reaped by those who have first exploited its potential and not by those who first invented it. Chinese were the first to invent the gun powder but Mughals, Britishers and other Europeans made use of its power to establish empires. It is also a historical fact that technology is generally first absorbed by business and industry and only then the armies with a vision leverage it to enhance its winning capability. Information revolution has already created a revolutionary impact on the industry and business.

Peter Druncker the doyen of management states "Today basic resources are no longer capital, labour, equipment, material and land but it is knowledge."

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of all people in the nation? If so, what mechanisms, consistent with the subordination of the military to civil power, as demanded in a democracy, need to be institutionalised?

(c) Perspective Planning (PP) - the management of change in force structuring, weapons and equipment and doctrines - has often been found short in relation to the nature of conflict fought and likely to be combated in the future. A fits - and - starts method of planning seems to have been pursued which has tended to incorporate increments of technology enhancements into existing force structure, as and when such enhancements became viable and attractive for interested components of the services. Is there a case for lending a joint service character to PP so that it can acquire a greater perspective of the revolution in military affairs by a holistic, inter-service appreciation of the nature of conflicts likely to be faced, our future military strategic compulsions and identification of risks associated with various postures and resource allocation levels.

(d) Is there a need to evolve a deterministic approach to generate military capabilities as opposed to the responsive approach pursued presently? Is there indeed a requirement to generate force-structure and doctrines based more on a bag of capabilities than on specific threat perceptions, in a strategic environment where the nature of threat itself is diffuse and ambiguous?

(e) *Energy Base Transition.* The oil reserves of the world are likely to be exhausted due to intensive use in the next 40 years. This would entail an across the board transition to alternate and renewable sources of energy. This is turn will have a radical impact upon the military means of propulsion, on weapon systems design and technology. The tank fleets, vehicle fleets, combat aircraft and ship propulsion systems would undergo dramatic changes. India is already importing 90 per cent of her oil needs. We need to look ahead to that not too distant future without oil and anticipate the nature of changes. The services will have to provide the lead in visualising these radical equipment transitions and providing the overview guidance to our R & D effort.

(f) What mechanisms of changes in existing mechanisms, need to be integrated in order to generate appropriate research and development thrusts at both national and military levels.

(g) Are our deliberate and crisis action planning procedures, both national and inter-service adequate for the requirements of the future? What changes if any are called for?

(h) The present structure of the Staff of Services Headquarters has often been described as gargantuan and extremely bureaucratic. What measures, both organisational and procedural, including radical restructuring, may become necessary for high-performing and efficient Service Headquarters functioning in response to better planning and implementation requirements?

OPERATIONAL LEVEL ISSUES

(a) In view of the possible extension of integrated data and communication links to lower and lower levels in the chain of command, is there a need to reshape the hierarchy of our force-structure by increasing the span of control either at Corps or Divisional level and thus eliminate either the divisional headquarters or the brigade headquarters?

(b) What re-structuring would be required for efficient and cost-effective joint planning at the theatre and subordinate levels?

(c) Centralised control is more efficient for achieving concentration and synchronisation. Since the requirements of delegation and directive style of command arose from the inability of commanders to 'see' the entire battlefield as the battlefield expanded in time and space, is there a case for shifting back to centralised command styles, as commanders are able to view the entire battlefield, albeit electronically, with greater clarity and unifying focus than subordinate commanders in their cellular engagements and battles?

(d) At present we have general purpose forces who, with minor equipment modifications, are used for combat across the spectrum of conflict. What conceptual changes in force structure and appropriate doctrine can be envisioned for future battle in varying conflict scenarios?

(e) The survivability of command and control nodes and elements will be critical to warfighting in the next century. What changes in command and staff structures and procedures will be required for efficient command and control in the highly lethal, precision-kill environment of the future?

(f) How should future commanders and staff be trained for the stressful and intellectually demanding environment of the future?

(g) In order to avoid information overload and operational security, what information must flow hierarchically and what otherwise? Is the answer situational, or can we make rules applicable in all situations?

national resource, talent and technology. Duplication, bifurcation and trifurcation results in avoidable waste and confusion. We fritter away valuable and usable energy in petty squabbles or hair-splitting and undesirable elements exploit the overlapping authority by hooking onto crooking. While asserting our individual supremacy we forget that collective supremacy can become an instant asset multiplier and thus enhance the national potential.

Tragedies or accidents, avoidable or unavoidable, sometimes due to sheer negligence do occur even in the most advanced bastions of technology, but the chaos, confusion and callousness are conspicuous by their absence, during the rescue, relief and investigative operations. Research and investigative operations are launched relentlessly to determine the causes in right earnest, so that humanity does not suffer a similar fate in future. They may or may not make the true findings public to protect their business or national interests, but possible remedial action will be initiated and followed up immediately.

We rarely, if ever, learn any lessons from the past. Even if we do, we won't like to share them with others. The inquiry reports which should be easily available in the book stalls, even the professionals find it difficult to locate them in their departmental libraries. Even rarer is the opportunity to conduct any research for promotion of flight safety. How many of us know, even now, who was sitting in which seat out of the three pilots killed in Sahara Boeing aircraft at Palam or what 'retro-mod' bulletin was issued by Airbus Industries pertaining to the A/320 aircraft after the crash at Bangalore, or what component of the 'system' failed which caused the IAC Boeing air crash at Imphal? In all these cases, as per the known evidence, there was no emergency. And who says that the mid-air collision is the first and worst of its own kind? Efforts must be made to enhance awareness about aviation and its complexities at all levels and in all spheres.

raised after the disaster. Similarly, availability of three dimensional radar is not an absolute necessity. An ordinary two dimensional surveillance radar could be effectively used by ensuring two or more blips are not allowed to merge, following a simple procedure of creating lateral separation irrespective of the altitudes or levels assigned and reported. Adequacy of one thousand feet vertical separation is needlessly questioned. It is a known fact that 1000 feet separation while cruising is sufficient but not during transition or manoeuvring stages-for reasons of lags, limitations, reactions of the instruments, equipment, machines, the humans. The separation of 1000 feet can get nullified in spite of the best intentions, unknowingly and unwittingly. More so, as mentioned earlier, what about the inevitable element of misunderstanding or 'hearing what one wants to hear'.

The last moments of the flight can always by recreated quite accurately with the help of Cockpit Voice Recorder, Flight Data Recorder and audio and visual ATC tapes, by analysing the tone and tenor of transmissions and their correlation with the time frames, traffic and transmission density and flight parameters. Vagaries of vagueness apart, one profound and practical hazard to Air Traffic, which could be a nightmare of any controller has not been mentioned at all i.e. restrictions due to VVIP flights on aircraft movements and airspace. The situations at times get so grim that we, from the VVIP cockpits had to plead with the controllers to give priority to other traffic or vary airfield closure timings disregarding the standard instructions, at least for our own safety. The problem is far too complicated to be encapsulated in limited air space. Suffice it to say that traffic at all stages becomes really unmanageable and accident prone particularly when the VVIP schedules are not adhered to and get changed frequently.

Nothing could be more farcical than the statement from the head of the department that the IAF was not permitting separate bi-directional corridors or entry and exit routes. The point is who controls the National Air Space? Civil authorities or military authorities or both? The civil authority is supreme, but the co-ordination is poor. There are no common goals to harness the

Tactical Level Issues

(a) Our present ethos for combined arms warfare devolve around 'affiliation' born of peace-time functioning including joint participation in exercises. Since integration and not affiliation will be the demand of the future high-intensity battle, is there a case for smaller, more mobile, self-sufficient, truly combined arms units? Suggest a capability profile and organisation for a possible 21st Century Combined Arms battlion?

(b) The profile of the warrior in the future will include a substantial and sophisticated technical acumen. What impact will this have on our methods of recruitment and training units and sub-units?

(c) One view of the future combatant is that he should be capable of dominating a military space two miles wide and one mile high. Comment.

(d) Adventure sports had provided creative solutions to military problems in the Second World War. Parachute and Gliders had created a tactical military revolution. Helicopters brought about the next jump in tactical mobility. Could adventure sports - especially para planes and powered hang gliders provide another mobility revolution by generating a "tactical hop" capability to fly over minefields and water obstacles?

(e) The application of military force in dealing with terrorist violence runs the serious risk of causing collateral damage to innocent civilians and bystanders. This is leading to the development of a whole host of non lethal weapons - which stun, decapacitate or immobilise temporarily. Should our armed forces adopt this non lethal approach while dealing with terrorist violence and urban insurgency situations? This would be specially applicable in case terrorist take shelter in holy shrines and other sensitive locations and installations.

Papers For the Seminar

All officers who wish to contribute on this theme should send in their papers by **15 Jul 97** to Secretary, Golden Jubilee Celebrations, Defence Services Staff College, Wellington, (Nilgiris)-643 231 (Tamil Nadu). Selected authors will be invited to address the seminar and their papers will be published in the final report of the seminar as well as the 'Trishul' Journal of the Defence Services Staff College.

Testing Times

MATIN ZUBERI

"This is the nearest thing to Doomsday that one could possibly imagine. I am sure that at the end of the world - in the last millisecond of the earth's existence - the last man will see what we just saw". This is how one of the Manhattan scientists reacted to the first nuclear test conducted in the New Mexico desert on July 16, 1945. The scientist who had arranged the explosion of the plutonium device shouted, "We are all sons of bitches now". Robert Oppenheimer later said that this was the best comment on the test. The bomb which decimated Hiroshima was a uranium bomb. It had not been tested before. Therefore, it can be said that the Hiroshima bombing itself was a nuclear test. A plutonium bomb destroyed Nagasaki. Some of the scientists suggested after the war that Los Alamos, the secret laboratory where the bombs were fabricated should be abandoned as a monument to man's inhumanity to man.

Addressing the American people after the Nagasaki bombing, President Truman declared; "The atom bomb is too dangerous to be loose in a lawless world...we must constitute ourselves trustees of this force... It is an awful responsibility which has come to us. We thank God that it has come to us instead of our enemies and we pray that He may guide us to use it in His way and for His purposes". The sanctimonious exceptionalism of the United States in the nuclear arena and the non-proliferation policy articulated later were neatly summarised by Truman. General Groves who pushed the Manhattan project with relentless energy wrote in a secret report dated February 21, 1946 that the United States should not permit any foreign power, in which it did not have absolute confidence, to make or possess nuclear weapons. If such a country embarked upon a weapons programme, the United States should destroy such a capacity before it could threaten American interests.

The first nuclear test in peacetime was conducted at the Bikini atoll in the Pacific. The bomb posed a serious threat of instant obsolescence to the American Navy. It became necessary to test the ability of ships to survive the destructive forces generated by the bomb. Inter-service rivalry and the need to secure a major role in the postwar defence establishment triggered the tests in 1946. The test series, code-named Operation Crossroads, involved 42,000 men, 150 aircraft and more than 200 ships. The target fleet for atomic bombing

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studies and reports, their diagnostic and remedial contents recorded by the experts and visionaries, panelists and commissions, generally gather dust in spite of our 'best efforts'.

Our track record in the field of flight safety is quite commendable despite our poor ratings on various scales by image-projecting mercenary agencies. But why do we attract international odium? It is due to the telescopic procedures, unplanned, obtrusive and incoherent approach to visualise and deal with disaster situation. Admittedly, pre-emptive or preventive action to avoid a disaster may not always be possible, however, our efforts in mitigating the trauma after a disaster are poorly conceived, rarely planned, invariably insufficient, ill-timed and without grace, or gratis, more so while dealing with the compensations, including the insurance sector. In both situations i.e., during the incubation period of a disaster and the post-disaster scenario, management's empathy for the supervisory apathy manifests itself, Authorities' orientation for finding faults rather than the causes invariably exhibits shallow knowledge and debased intentions.

Controlling the skies is not an ordinary job. It requires working knowledge and specific understanding of the systems, basic skills and continuous practice, cross training and periodical skill tests, precision, physical fitness to ensure tension free concentration, communication skill, assertiveness and team spirit. Above all full knowledge of the equipment, aids, facilities available and their limitations is essential. Just as an alert and assertive traffic policeman on a busy crossing can avert or reduce confusion and snarls, with or without traffic lights, by instilling a bit of discipline, likewise an active, alert and diligent controller can cause an orderly flow of traffic in the air or on the ground. Under the control of such controller, the pilots can feel the difference in the cockpit and always gain confidence in their own ability for safe flying at busy airfields, corridors or terminal areas, even during rough weather, poor visibility, heavy rain, low clouds, thunder, turbulence or fog.

The controversies about the method of using available air space should be discussed and sorted out in good time and not

dia's vastness can accommodate much higher density. Western countries with meagre air space could regulate their traffic and still do so using only single corridors. Separate entry and corridors cannot be the fail safe method of avoiding such collisions since the flights originate or terminate at the same point. Crisis-crossing generates its own problems which can be more confusing and troublesome to tackle. Leave alone two runways solving the problems created, even two separate airfields in close proximity cannot make matters easier or safer. Difficult problems have difficult solutions and nothing can replace dedication, devotion, discipline and diligence-major ingredients of any safe and successful venture: and they flow from top to bottom in any well-run organisation.

We often cry after the milk (read blood) is spilt but hate to heed history and its lessons. We often fall back on our lack of decisiveness, bureaucratic hassles, the red tape and delays, lack of accountability *et al.* Surprisingly the autonomous bodies, who are supposed to generate their own funds and have every element in-house also take refuge in the same smoke-screen as the others who actually lack resources and are the prisoners of the vicious system. Definitely an unhealthy trend we need to set right. Greater pity is that we do not even use or fully exploit what we have but condemn it and demand what we do not have. We do have some stamina in putting a cart before the horse and pushing it back somewhat. After all we know that it is only a bad workman who quarrels with his tools and polluted boardroom atmosphere that generates clumsy and quarrelsome management.

Our quality of manpower, assets, airspace, tremendous potential to meet the growing demands or quantum increase, is as good as any in the world but the authority and responsibility are not co-terminus. Authority is claimed and responsibility is dumped. Co-ordination, which is essential in a free and democratic set up often turns out to be an unending game of Ping-Pong. The political leadership, the bureaucrat, the technocrat, the jargonist, the worker in field seldom share each other's perceptions and never have a common goal. That is the reason why the

consisted of 73 Japanese, German and American ships equipped with instrumentation to collect data on blast, pressure, heat and radiation. The animal kingdom was also represented aboard the ships. Representatives of foreign governments, U.S. Congressmen and journalists were invited to witness the tests. Live transmission of the blast was arranged.

Levrenti Beria, burdened with the responsibility to produce a bomb for the Soviet Union, sent two scientists, one of them disguised as a Pravda correspondent. The first test of the series was conducted on July 1, 1946. The nuclear device, with a picture of the pinup girl Rita Hayworth stencilled on it, exploded in the midst of 73 ships; but only five ships went down. Radio listeners, waiting breathlessly for the explosion, heard nothing. It was a great disappointment and was contemptuously described as "a sneeze in a windstorm". One of the Russian observers dismissed it with the words "Nothing much". The second test on July 25, 1946 was far more impressive; vast quantities of radioactive debris were thrown into the atmosphere and produced a massive mushroom cloud. A French dress designer advertised one of the beauties on the French Riviera as an Anatomic Bomb and produced a scandalous bathing suit immortalising the nuclear tests. It was a marketing triumph indeed.

The first Soviet test, code-named "First Lightning", occurred on August 29, 1949. By then the American stockpile consisted of at least a hundred bombs. The United States then embarked on a crash programme to produce the H-bomb. On October 3, 1952 Britain conducted its first test at the Monte Bello Islands of Australia. The first French test occurred on February 13, 1960 in the Sahara Desert; and the Chinese conducted their first test on October 16, 1964 at Lop Nor. The early tests of all these countries were atmospheric tests. India is the only country whose first nuclear device was conducted underground at Pokhran on May 18, 1974. This was a demonstration of the technical competence of Indian scientists and engineers.

The five nuclear weapon powers have exploded 511 nuclear devices in the atmosphere with a total yield of 438 megatons - equal to 29,000 bombs of the size dropped on Hiroshima. France is the only country to have exploded nuclear devices in Africa. For the period between 1945 and 1985, the average had been one test every 9 days. Dating from each country's first explosion, the scorecard for the United States is one explosion every 18 days for the period, for the Soviet Union/Russia, one test every 22 days; and for France, Britain and China, one test every 57, 340 and 279 days respectively. China was the only country to test in 1993 and 1994 and since May 1995 China and France have increased their score. The United States leads with 1,054 officially acknowledged tests, 63 of which involved more than one nuclear device. The maximum number of tests were conducted in 1962; the mind-boggling figure

of 178 was reached because of the impending nuclear test ban. The numb of American tests in 1962 was 96, that of the Soviet Union 79, and of Brita and France 2 and 1 devices respectively. The maximum number of British te in a single year has been 7 in 1957, for France 13 tests in 1980 and for Chi 3 tests in 1966 and 1976. The grand total so far has been 2046 nuclear tes France continued atmospheric testing until 1974 and China until 1980.

The United States, Britain and France exploded nuclear devices in t Pacific. The Nevada desert has been the location for a large number of Americ tests, including some tests done jointly with Britain. The gambling industry Las Vegas used the testing programme to boost tourist trade. Its Chamber Commerce helpfully provided tourists with nuclear shot calendars to facilit visits to the dawn extravaganzas of light, colour, sound and nuclear clo effects. Hotels arranged food packages for bomb-watchers. One motel claim that its guests could witness the nuclear flash without leaving their poolsi lounge chairs. The explosions were called alarm clocks of Las Vegas. Lo residents and tourists used to stand in their bathrobes to watch the blast. Th consulted their watches at the time of the explosion; they knew that it took t ensuing shock wave about 7 minutes to reach their town. Having witnesse rainless thunder and lightning, they dressed, breakfasted and began their norm day. An "atomic hair do" and an "atomic cocktail" were the rage for a whil One hotel sponsored a Miss Atomic Bomb Contest which featured you beauties wearing puffy mushroom clouds pinned to their bathing suits.

The *New York Times* joined with enthusiasm in propagating the nucle culture. It informed readers that between June 25 and September 1, 1957, the would be more than 15 nuclear detonations and that bomb-watching was breath-taking experience. The article mentioned routes for tourists includi important viewing points. Instructions were given for photographers. The fireba from explosions lasted long enough for a series of pictures. The chief haza of bomb-watching was said to be the omnipresent danger of car accidents; their excitement people became careless in their driving. Dozens of repute journalists regularly travelled the 65 miles from Las Vegas to the test site order to witness what were called "freedom blasts". Nuclear explosions lower yields caused great disappointment. "Bigger bombs, that's what we' waiting for", said a night-club operator, "Americans have to have the excitement". The Governor of Nevada, refering to the test site, exclaime "We had long ago written off that terrain as wasteland, and today it's bloomi with atoms". The bomb had been truly domesticated. The United Stat manufactured about 60,000 nuclear weapons in 71 types, configured in 1 weapon systems. The average production rate between 1945 and 1985 w about 4 nuclear devices per day.

communication failure. The language, the vocabulary, the tone, the density of radio telephony natter, what is transmitted and what is received, what is intended and what is understood, what is anticipated; interpreted and implemented; the alertness and firmness of the controller using proper, familiar or standard terminology pointedly to ensure compliance. Take, for instance, the recent case of aircrash involving Saudia and Kazak aircrafts. The Kazak Pilot coming in for landing is keen for an uninterrupted descent and the other is keen on uninterrupted climb to his cruising level. Hence the Saudia, when cleared to climb upto flight level 14,000 feet, knowing the reciprocal's clearance upto 15,000 feet, has transmitted approaching 'Flight level 140', with the hope of getting further clearance above 14,000 feet. The controller instead of directing him to 'maintain' 14,000 feet repeats "Clear to Flight level 140". Even if Saudia got the message and complied with it, Kazak could have mistaken the instructions to be for him and vacated flight level 15,000 feet or, Saudia could have crossed 14,000 feet by the time he got the message and mistaken Flight Level 140 as 240, disregarded repeated clearance as meant for Kazak while assuming his clearance above 14,000 feet for granted.

As far as the calibration or graduation of the instrumentation and gadgetry is concerned, different scales are used but conversion tables are also readily available. Even altimeter-atleast one out of the four-is in feet. But the instrumental lag and limitations, permissible errors and crew complacency regarding exactness can add up to minimise the separation. However, such issues will be established by the judicial inquiry by pooling in other data. But under such circumstances the controller could have averted the disaster by creating lateral separation, even if the pilots confirmed the assigned flight levels and vertical separation. This is where the human ingenuity, initiative, common sense and motivation score over the proliferation of 'state-of-the-art' equipment and counter the bravado of dare-devil, over-confident or genuinely mistaken cockpit crew.

The traffic density in our country is just as much as was in the western countries about 30 years back and because of In-

Dead persons tell no tales. The investigators cannot recreate the accident situations exactly. They have to go by only telltale evidence of various hues from wreckage, survivors, eyewitnesses, the systems managers cum manipulators, personal experience and expertise, vested interests and lobbies, organisational loyalties and national interests. Their task is further compounded by 'flighty releases' and media pronouncements. Just to illustrate, take the case of mid-air collision of 12 November, 1996. Even 48 hours after the occurrence, the editorials in leading dailies mentioned type of aircraft involved as TU-154 instead of IL-76. The so-called controllers, directors or the law makers and enforcers try to pre-judge the issue or 'jump the gun' in a bid to give a subtle twist from the main issue, thereby deflecting the attention without ever admitting their own role in 'incubating' a hazardous situation into a full grown tragedy.

In the recorded history of aviation's major disasters such as mid-air collisions, explosions, collisions on the ground, crashes due to mechanical or structural failure, design defects and navigational errors have been researched, analysed and publicised to prevent their recurrence. They have occurred in spite of fully automated landing aids, highly qualified professionals in their respective disciplines, fully serviceable state of the art machines, on the biggest and the best equipped airfields.

Despite these accidents, aircraft is still the safest mode of travel. Throughout Europe, fifty thousand people get killed in road traffic accidents per year and this figure far outnumbers the total number of passengers killed in civilian aircraft accidents since air transport began 84 years back. The total number of major air accidents chronologically recorded and reached is only 145. Statistically speaking, any person can expect to fly safely for one thousand years before being involved in an air disaster. But that really means, disaster can happen anytime during those thousand years. Thus the drive to the airport may still turn out to be the most dangerous part of the journey.

In the category of human failure accidents, the most elementary causes can be ground-to-ground, ground-to-air and air-to-air

The Soviet Union conducted 30 tests in 60 days culminating in a gigantic explosion with a yield of 50 megatons on October 30, 1961. This was the largest test ever conducted. The atmospheric disturbance generated by it orbited the earth thrice and the flash was so bright that it was visible at a distance of 1,000 kilometres despite cloudy skies. A gigantic, swirling mushroom cloud rose to the height of 64 kilometres. The fireball was in excess of 2 miles across. Night became day. One cameraman in an aircraft observing the test recalled hearing a remote, indistinct and heavy blow "as if the earth has been killed".

II

A comprehensive nuclear test ban has been one of the oldest items on the agenda for disarmament. The U.N. General Assembly has passed more than 70 resolutions on the subject. All the bewilderments of the Nuclear Age came to focus in a mounting public resentment against radioactive fallout. Instead of grappling with the almost intractable horror of thermonuclear annihilation, people concentrated on the insidious threat of radioactive contamination. The triggering event was the 15 megaton American thermonuclear test code-named Bravo on March 1, 1954. A huge fireball ignited the pre-dawn skies for over a hundred miles. The fallout covered 7,000 square miles of the Pacific. A small Japanese fishing trawler inappropriately called Lucky Dragon was in the area. One of the Japanese crew was startled by a dazzling light and shouted, "The sun rises in the west". The Japanese fishermen fell sick; one of them died on September 24, 1954. The Japanese people mourned him as the world's first H-bomb casualty; the United States government paid his widow a cheque for one million yen. It was this American test which impelled Jawaharlal Nehru to make a passionate appeal for a test ban on April 2, 1954. He had proposed it as a disarmament measure. If his proposal had been accepted most of the horrors of the thermonuclear arms race would have been avoided. The United States and the Soviet Union had just started to produce H-bombs and France and China had not exploded their first nuclear devices. Nonproliferation missionaries cite Nehru's appeal now to bamboozle India into agreeing to their new version of a comprehensive test ban (CTB) but this is nothing more than a nonproliferation measure. Their lectures and angry admonitions should not delude us into believing that they have suddenly been converted into campaigners for nuclear disarmament.

The late 1950s and early 1960s witnessed a worldwide movement against nuclear testing. The tangible threat of radioactive contamination, especially the fear of the isotope Strontium-90 settling in the bones of the rapidly growing children, galvanised diverse elements in societies. Even the *Playboy* magazine published an editorial condemning "The Contaminators", exclaiming that all

children "may die before their time....or having spawned grotesque mutations" Nuclear disarmament propaganda had a new image-skulls and cross bone painted on a milk bottle. The Pugwash movement played an important role i championing the cause of a CTB as a "first step" towards nuclear disarmamen Nobel laureate Linus Pauling drafted a petition signed by 9,235 scientists fro many countries and delivered to the United Nations. An agreement to sto testing could serve as "a first step" towards the "effective abolition of nuclea weapons", it said. The official position of the nuclear weapon powers was tha the nuclear fear was unjustified. In January 1962 President Kennedy publicl drank a glass of milk and declared that he was serving the delicious beverag at every meal at the White House.

The test ban issue became a major factor exacerbating Sino-Sovie relations. According to the Chinese version, Soviet leaders had informed them in the fall of 1962 about the possibility of an agreement to stop testing; th Chinese urged their allies not to sign it. There were several issues which wer casting their shadow over Sino-Soviet relations. Ideological differences personality factors, especially Nikita Khrushchev's efforts to improve relation with the United States, and acute conflict regarding the scale and nature o Soviet assistance in the nuclear field had created a crisis situation. The Chinese declared that on June 20, 1959 Soviet leaders "unilaterally tore up the agreement on new technology for national defence and refused a Chinese request for "a sample of an atomic bomb and technical data concerning its manufacture". They criticised Khrushchev for having "divorced the cessation of nuclear tests from the question of disarmament". The *People's Daily* thundered: "The discontinuance of nuclear tests should under no circumstances become a means by which the United States may maintain nuclear superiority". The Chinese accused Khrushchev of adventurism and capitulationism during the Cuban missile crisis. After the arrival of British and American delegations to negotiate a test ban, a Chinese delegation led by Deng Xiaoping which had been trying to hammer out party differences departed from Moscow; when it arrived at the Beijing airport it was given a hero's welcome by party functionaries led by Mao himself. The Partial Test Ban Treaty (PTBT) of 1963 was denounced by the Chinese as "a big fraud to fool the people of the world". They vehemently charged: "This treaty completely divorces the cessation of nuclear tests from the total prohibition of nuclear weapons, legalises the continued manufacture, stockpiling and use of nuclear weapons by the three nuclear powers, and runs counter to disarmament". The real objection of the Chinese was that it was a measure designed to impede the development of their own nuclear deterrent. The treaty was the first global agreement to protect the environment and was partly intended to erode the growing opposition to nuclear weapons symbolised by the fear of cross-border diffusion of radioactive debris. While its impact on nuclear disarmament was negated by vigorous underground testing, it was the

Managing the Sky with Safety

BY AVM SS MALHOTRA, AVSM, VM (RETD)

Breast beating comes naturally to mankind whenever a tragedy strikes (expectedly or unexpectedly). Accidents and tragedies become a part of life particularly when we challenge nature or provoke its fury. No two accidents are alike, yet the reactions are almost identical. Since accidents are least expected, coping with their aftermath becomes laconic and distressing. The survivors of the victims undergo unmanageable trauma. The accusing fingers become spring loaded and all functionaries try to run for cover (up) to keep their tails clear. The emphasis shifts from finding out the cause of the accident to culpability and blame worthiness, which is certainly detrimental to the interest of aviation and flight safety. The technological advances, the design defects, the operating limitations always come under close scrutiny leading to further refinement of design, manufacture, operating procedures and maintenance practices.

Aviation has its inherent complexities all over the world. Developed, developing and under-developed countries are all beset with the problems of expanding air travel, congested aircraft manoeuvring areas, the human factors like the level of expertise and understanding or their work culture, economic viability, market forces and profitability, industrial back-ups and security environment. Moreover, the machines are as good as the men behind them. The advanced aids can prove to be hindrances if not interpreted properly and used diligently. Automation has its own limitations and cannot replace man entirely. Human ignorance can always override the artificial intelligence of automation. Automation does help the man but can induce complacency as well. The fail-safe designs can enthuse the humans to a false sense of safety and inaction.

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international communist movement which was most directly and adversely affected by it. Chinese delegates at the Geneva negotiations for CTB forgot their earlier emphasis on a linkage between nuclear disarmament and a test ban.

The day the American Senate approved the PTBT it also voted for the then largest peacetime defence budget in history. China and France never subscribed to the treaty because it was not in their national interest. India was one of the early signatories. Pakistan joined it only in 1988. With testing having gone underground and the weapons becoming invisible, the milk became clean, the geiger counters stopped clicking; it was time to "talk rationally and coolly about nuclear weapons". So pontificated one of the most influential nuclear strategists of the United States.

Test ban negotiations were resumed in 1977. About 90 per cent of the text of a multilateral treaty was agreed upon. A new hurdle appeared in the form of arguments regarding the reliability of the stockpiles of nuclear weapon powers if a complete ban was imposed. "The panic that hit the arms testers in 1978 in both the United States and Britain", says the then British Foreign Secretary David Owen, "when they realised that an agreement was close; was one of the most disgraceful episodes of people protecting their jobs that I have ever witnessed". The Reagan Administration viewed a CTB as contrary to American national interest. Nuclear deterrence required continued testing; moreover, the Strategic Defence Initiative necessitated a massive bout of testing. Kathleen Bailey, then an official of the U.S. Arms Control and Disarmament Agency, bluntly said, "If the U.S. is forced to choose between its own national security and its nuclear testing programme versus the survival of the NPT - which we would dearly like to see - the U.S. would choose maintenance of its own national security and, therefore, its own nuclear testing programme". There is no conceivable reason why this criterion should not apply to Indian decisions concerning national security.

III

Negotiations for a CTB were resumed in the Conference on Disarmament at Geneva in January 1994. The real impetus for this step was to avoid criticism of the nuclear weapon powers at the impending NPT Review and Extension Conference. The review conferences since 1975 had witnessed acrimonious exchanges on the test ban issue. The 1995 Conference assembled under a propaganda barrage highlighting positive features of the global nuclear order. John Holum, Director of the U.S. Arms Control and Disarmament Agency, had even hailed "the end of the arms race". The nuclear weapons powers, led by the United States, carefully orchestrated the deliberations of the

Conferences and were astonished by their own success. While the Extension Conference was in session, Clinton and Yeltsin agreed at Moscow summit to deploy theatre missile defence systems. It is one of the paradoxes of the nuclear age that defensive measures have offensive connotations. The Anti-Ballistic Missiles Treaty of 1972, cornerstone of the entire nuclear arms control structure built over decades, deliberately left populations of the United States and the former Soviet Union vulnerable to nuclear attack. This arrangement eliminated the threat of a first strike. Arms control treaties relating to offensive nuclear weapons are made possible because of the ABM Treaty. Influential members of U.S. Congress want this treaty to be reinterpreted and, if necessary, abrogated in order to facilitate deployment of ballistic missile defences. Their current favourite is Theatre High Altitude Area Defence (THAAD) system. Ratification of START II by the Russian Duma is held up because of the unequal and burdensome terms imposed on Russia. General Boris Tarasov has called it an outrageous example of Russian humiliation. The proposed extension of NATO to Central Eastern Europe and the assault on the ABM Treaty would make it more difficult for nationalist elements in Russia to give their approval to SALT II. By devaluing the deterrent effect of British, French and Chinese nuclear forces, deployment of ballistic missile defences will provide an excuse for these countries to retain and even to augment their nuclear stockpiles. China has already registered its protest – theatre missile defences could render, it was stated in February 1995, the Chinese arsenal "completely ineffective" and leave China open to blackmail.

The United States is committed to maintaining an "enduring stockpile". Even if START II is ratified by the Russian Duma, the total number of American nuclear warheads will remain between 9,500 and 10,000. General Eugene Habinger, Commander of the U.S. Strategic Command, testified before the Senate in March 1996 that constant efforts will be needed to preserve technological edge over the next 30 years. The United States will maintain an enduring stockpile for the next 50 years and beyond. A Presidential directive was issued in November 1993 mandating American weapons laboratories to ensure "preservation of the core intellectual competencies in nuclear weapons" including weapons design. The Energy Department will be spending $20 billion on the newly established Science Based Stockpile Stewardship programme. The three weapons laboratories are developing comprehensive plans to extend the life of each weapon system slated for the enduring stockpile. If Secretaries of Defence and Energy departments inform the President that they no longer had a "high level of confidence" in the safety and reliability of a nuclear weapon of the type critical to nuclear deterrence, the President in consultation with Congress could withdraw from the CTBT. The Nuclear Posture Review of 1994 also requires the Energy Department to retain the "capability to design, fabricate, and certify new warheads".

criminal who is being tracked in 'hot pursuit' can get away due to self created administrative and bureaucratic obstacles.

COUNTER INSURGENCY TRAINING

Unfettered proliferation of arms, weapons and explosives and increasing sophistication of means and methods of inflicting terror has increased the premium on specialised training. To fight this man, the security forces, police and even the administrative officials need to undergo specialised training in handling LIC situations.

The 26 year old Counter Insurgency School of the Indian Army at Vairangli in Mizoram has established another wing in Jammu where Army units moving into J and K are imparted pre - induction training. At present this specialised training in mainly imparted to Army personnel with token representation from the police, para military forces and the Navy. It is recommended that the rank and file of para-military forces and police of sensitive states be given dedicated counter insurgency training at such schools. Either the sphere of influence of existing schools be increased or new training centres with expert instructors be set up.

CONCLUSION

Having identified the problem and realising the implications of inaction, a concerted effort on part of the Government with a clear political aim is required. Mere setting up of a committee to look into the issue and forwarding recommendations shall yield nothing till it is backed by a cohesive team of motivated personnel, appropriately equipped, backed by experts, who would implement government policy and take the steps initiated to their logical conclusion.

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terrorists against his government. Russia has charged Pakistan with aiding the separatist battle in Chechnya. Even Arab governments in Egypt and Jordan have complained that Pakistanis were involved in extremist movements in their countries.

A concerted effort by the Government towards mobilising diplomatic initiatives the world over, in order to expose the extensive support being provided to the insurgency and the funnelling in of large quantities of arms and lethal explosives into India, must be undertaken. Feasibility of targetting the accessible camp locations with planned special commando type operations and sabotage and even punitive action in terms of air strikes must be studied. The Government of Pakistan must be confronted with the evidence and warned to abstain from formenting violence in India. Should this initiative not elicit the desired response, the option of punitive strikes and special operations must be exercised.

CHECKING THE SPREAD OF ARMS PROLIFERATION TO HITHERTO SAFE REGIONS

The ISI is known to be expanding its operations in India to include newer areas with large sections of muslim population, evoking religious sentiments in the name of 'jehad'. Since 1992 when a couple of ISI agents were caught from UP, interrogations revealed a strong ISI network in Western UP. A number of people were arrested and a huge cache of arms and ammunition was recovered from Saharanpur, Meerut, Muzaffarnagar and Haridwar district of West UP. An ISI agent who planned to bomb several important places in West UP was arrested at Attari railway station in Punjab. Following these arrests and seizures, special anti - ISI cells have been opened in Western UP in Muzzafarnagar, Saharanpur and Ghaziabad. By analysing the past trend and collating intelligence, such soft spots must be identified and more of such anti - ISI cells be opened up. The importance of intelligence gathering, horizontal and vertical exchange and speedy dissemination assume great significance in such efforts. Greater coordination and removal of administrative hiccups between the police forces of different states will ensure that no militant and

The United States has conducted 51 per cent, USSR/Russia 35 per cent, France 10 per cent, and Britain and China 2 per cent each, of all nuclear tests. Obviously, the United States and Russia have accumulated enormous data on every aspect of explosive techniques. They have also developed simulation technology useful in understanding various elements of nuclear explosions without conducting tests. A new generation of laboratory testing equipment is being built at enormous cost. As Vladimir Inkimets of the Russian Academy of Sciences has put it, "instead of test sites we will have information test sites". British nuclear scientists have long been recipients of vital information from the American weapons laboratories and have jointly conducted nuclear tests in the Nevada desert. France and China recently conducted tests, incurring public disapproval, in order to obtain more data and to complete the modernisation of their nuclear forces. The United States and France signed an agreement on June 4, 1996 which provides for sharing a vast amount of computer data drawn from simulated explosions. China was also offered simulation technology. It is reported that the United States is anxious to avoid a disastrous nuclear accident anywhere in the world which may provoke a domestic public outcry leading to new constraints on the size and location of the American nuclear arsenal.

China's nuclear warhead modernisation is geared to increasing Beijing's targeting options. More accurate weapon systems with a higher yield-to-weight ratio would considerably increase nuclear punch. It is reported that a computer-modelled study conducted in 1990 concluded that China would join nuclear disarmament efforts only if the United States and Russia reduced their nuclear armouries to the level below 600. Thus China's strategic calculus demands that its military capabilities should be measured against those of the United States and Russia. Influential security analysts in the United States, however, maintain that the American nuclear stockpile should not be lower than that of the combined nuclear forces of Russia, Britain, France and China.

The French Defence White Paper of 1994 stated that nuclear weapons allowed for avoidance of a conventional arms race which would be "unacceptable from a financial viewpoint". A Franco-British Joint Commission on Nuclear Policy and Doctrine has been formed and there are vague references to a "Europeanised deterrent." The Maastricht Treaty of 1991 mandates common defence for a future united Europe. "When Europe becomes a federal state", said a senior official of the European Union, "logic would dictate that Germany and the rest must co-inherit whatever is the nuclear weapons legacy of France and Britain".

While attempts were being made at Geneva to remove brackets from the rolling text of the test ban treaty, the nuclear weapon powers were articulating

at the Hague, their views regarding the utility of nuclear weapons and their unique contribution to the maintenance of world peace for 50 years. They argued that NPT recognised their possession of nuclear weapons without placing any limitation on threat or use of these weapons. The British government advised the International Court of Justice to drop the case regarding the legitimacy of nuclear weapons because the international community had "sensibly elected to draw a veil of constructive silence" over the issue. A French professor said the Court had been "placed in the position of a mathematician asked to solve an equation containing an infinite number of unknowns". An American legal luminary pointed out that each of the nuclear weapon powers had made an immense contribution of human and material resources in building their nuclear arsenals, upon which "many other states have decided to rely for their security". Another American expert observed that nuclear deterrence had "saved many millions of lives from the scourge of war during the last 50 years" and that in this sense, nuclear weapons had been used for over half a century. The Court was warned against interfering with deterrence. A Russian lawyer candidly maintained that human rights treaties were not designed with a view to concerning themselves with situations in which nuclear weapons could be used. And a British nuclear expert was bold enough to say what could not be said at Geneva or in the precincts of the U.N. General Assembly, "nuclear weapons might be used in a wide variety of circumstances with very different results in terms of likely civilian casualties" and in some cases "it is possible to engage in a nuclear attack which caused comparatively few civilian casualties". Kathleen Bailey, senior fellow at the Centre for Security and Technology at the Livermore Laboratory, in her comment on the judgement of the International Court of Justice, pointed out that nuclear weapons being the ultimate tool of coercion the ultimate commitment to their use "is in the best interests of Americans".

There are reports and articles in reputed journals advocating use of nuclear weapons against the so-called rogue states. The U.S. Joint Chiefs of Staff's "Joint Military New Assessment" of 1992 called for nuclear weapons to be used to deter not only nuclear attack, but also to deter use of chemical and biological weapons. The Pentagon's Fiscal Year 1995 Annual Report states that in addition to deterring use of Russian nuclear weapons, consideration should be given "to whether and how U.S. nuclear weapons and nuclear posture can play a role in deterring acquisition of nuclear weapons by other nations". In a testimony before the Senate Foreign Relations Committee on March 28, 1996, William Perry stated that the weapons available for response to the use of chemical weapons included nuclear weapons. These statements seem to indicate the possible use of nuclear detonations for the first time since Nagasaki. They also undermine the so-called negative security assurances given to the non-nuclear weapon states parties to the NPT.

INCREASING POLICE EFFECTIVENESS

This was amply proved by KPS Gill's Commando police groups in which he pitted Jat Sikhs of the Punjab Police against the Jat Sikh terrorists.

The police force today needs to be modernised. They should be given the appropriate modern equipment which must be handy and user friendly. While it is the police which has to look after the routine law and order, it is the same police which must rise to the occasion when the requirement is to nip a revolt in it's bud. It does not behove a police man to wield a 303 rifle when pitted against a terrorist and criminal, armed with an AK-47 and other sophisticated weaponry. Correct functioning at the local police station level must be made the core of the correctional thrust. The ratio between the number of police personnel and the population needs to be fixed at practical levels. While provision of additional police stations and the manning of existing ones need immediate attention, adequate checks and balances must be introduced to ensure the efficiency of the force at all levels.

TARGETTING ARMS SUPPLY AND TRAINING CAMPS IN POK AND PAKISTAN

Our country has had some irrefutable evidence of at least a hundred different camps in POK and Pakistan which are supplying arms and explosives to subversive elements and providing training to the youth from our country. There are agencies which are recruiting foreign mercenaries, arming them, providing detailed briefings about specific subversive activities and sending them into India through a well developed network of access points and safe havens. When in India, terrorists receive full support of the India based counterparts of their organisation.

The suspected mastermind of the 1993 World Trade Centre bombing in New York was caught by US officials from the safe sanctuary in Islamabad in February 1996. In Feb 1995, during Benazir's state visit to his country, Phillipines President Fidel Ramos protested that Pakistanis were fighting alongside muslim

7. Intelligence departments of para - military forces like CRPF, BSF, ITBP and so on.

At present horizontal and vertical dissemination of information does not take place. Since an effective intelligence machinery takes a long time to evolve, the Government needs to dedicate effort and sufficient resources to make experts available with appropriate equipment at their disposal at the earliest. The whole organisation needs to be rewamped, depoliticised and simplified. A simple and cost effective method that will ensure a fluid exchange of intelligence information is to network all the agencies and end users of intelligence on computers. Due care will have to be taken to ensure information security. Penetration of the terrorist's and arms smuggler's organisation and planting of one's own agents as moles must be given priority in order to gain an insight into the thought processes of the terrorists and expose their sanctuaries.

A data bank needs to be built up which must contain intelligence in the fields of forensics, weapons, explosive devices, timing mechanisms, personnel and vehicles. This tool of information technology has been effectively employed by the German Bundes - Kriminal - Amt (BKA) the federal criminal office. They amassed ten million pages of data on wanted terrorists, their habits and associates and used the information to track down individual terrorists using special anti-terrorist 'target teams'.[16] Highly developed forensic intelligence, on weapons and IEDs is maintained in data banks.

Use of Satellite Intelligence, SIGINT (Signals Intelligence), ELINT (Electronic Intelligence) and IR (Infra-Red)) photography must be made to build up a comprehensive picture, identify strongholds, camps and so on. Use of sophisticated electronic spy gadgetry viz. listening and tracking devices etc. must be effectively dove-tailed into the total intelligence gathering machinery. In 'Operation Clam' in Spain in 1985 involving French Overseas Intelligence Service and American CIA, electronic bugs were introduced into terrorist cars and weapons. These were subsequently tracked to a huge underground arsenal near the Spanish border.

The deliberations at Geneva were taking place while these related developments revealed that, emboldened by the unconditional extension of the NPT, the nuclear weapon powers had formed an alliance against the non-nuclear world. They conducted their own secret negotiations to sort out minor problems resulting from their different learning curves on the path of nuclear technology. Offers of simulation technology were most helpful in this regard. An agreed text of a CTB was then presented as a *fait accompli*. Despite repeated efforts, India could not get any of its security concerns accommodated. India's insistence on a time-bound agenda for nuclear disarmament was rejected as an unrealistic and utopian scheme. If nuclear disarmament is not possible after the end of the Cold War, when will its time come? This is the most opportune moment for eliminating these weapons for ever. India, since the inception of its nuclear programme, had endeavoured to protect its indigenously built capabilities from foreign intrusions. There is a national consensus, cutting across parties, to preserve the nuclear option. The Sino-Pakistani nuclear axis is a mjaor threat to Indian security. Moreover, Foreign Minister I.K. Gujral has pointed out that Diego Garcia is a base for nuclear submarines. India's double veto at Geneva was based on national consensus. The outrageous provision regarding entry into force of the treaty was an intolerable imposition. India's exemplary restraint since 1974 has not been appreciated by countries which are accustomed to understand only the language of force. Indian policy makers must now implement the imperatives of missile-borne deterrence.

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Counter-Proliferation US Plans and Objectives

B RAMAN

The move for a well-integrated Counter-Proliferation Initiative (CPI) under the leadership of the US Defence Department (Pentagon) and with the active involvement of the Central Intelligence Agency (CIA) was a consequence of Operation Desert Storm against Iraq in 1991.

In a report to the US Congress on the activities of the Pentagon during 1994 submitted in February, 1995, Mr. William Perry, US Defence Secretary, referred to the following lessons from the Operation with regard to Weapons of Mass Destruction (WMD) and missile delivery systems which led to the formulation of the CPI:

(a) In each of the categories of WMD-nuclear, biological and chemical-the US forces were in for a surprise.

(b) The Iraqi progress in its nuclear weapon programme and its direction and technical character were different from what the US had assessed them to be before the war. Although Iraq did not have enough fissile material for a bomb, its weapon programme "was farther along".

(c) To the USA's surprise, Iraq did not use its large stock of chemical weapons to halt the advance of the allied forces and there was no credible information as to why it did not do so.

(d) Even though Iraq was known to have certain biological weapon facilities, the US forces did not understand fully as to how to destroy them while minimising the ill-effects on the allied forces (collateral contamination).

(e) While the military impact of the use of the Scud missiles by Iraq was minimal, it had a significant political impact on Iraq's neighbours and their likelihood of entering the war or being drawn into it. Before the war, there was no adequate assessment of the likely political impact.

The first step in the CPI was the setting-up of a Counter-Proliferation Centre in the CIA in 1991. This has since been expanded and Mr. Perry's

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is brought under surveillance. An effective control and reporting organisation must be set up to enable the local operatives and local populace to provide timely tip off on arms smuggling activity or likely infiltrations.

The almost non existent police force in the North East must be brought into its own and made to take charge of the law and order situation in the urban areas and villages while the BSF supported by the Army and para military forces can concentrate on fencing, floodlighting the border and carrying out effective policing of the border to check the infiltration of arms and weaponry into the country.

INTELLIGENCE

The importance of good intelligence in seizure of arms and prevention of proliferation of arms and weapons through clandestine trade and smuggling cannot be over emphasised. An infiltrator or smuggler is often an invisible enemy and to track down such an adversary, good intelligence is of essence. Today the arms and drugs smugglers are backed by syndicates and powerful drug lords and influential power brokers. It, therefore, becomes absolutely essential that their organisation be penetrated if possible or else adequate intelligence be gathered and disseminated in real time so that swift and timely response may materialise. The IB is responsible for domestic intelligence, including computer espionage operations under the Ministry of Home Affairs. It has offices in every state and liaises with the state's CID and other special branches. The other agencies contributing to the intelligence picture are :-

1. Research and Analysis Wing.
2. Military Intelligence.
3. Enforcement Directorate.
4. Customs Intelligence.
5. Revenue Intelligence.
6. Intelligence departments of the Navy and the Air Force.

d) The passes and gullies into the Valley are guarded by BSF pickets.

e) The security forces are vested with adequate powers of search, seizure and arrest in this belt.

The measures already in force towards sealing of the border in J and K are at best a deterrent to the infiltrator, since such a terrain cannot be made impenetrable and an odd person may sneak through. However, it must be ensured that these measures are effectively employed with security forces being trained especially in counter insurgency operations and equipped with anti terrorist equipment. In the overall approach greater mobility and flexibility is desirable. The static bunkers and pickets in towns are likely to become obvious targets for militant action. These must give way to mobile patrols and reserves which respond swiftly. While security forces guard the border, vital installations, communications and so on, the visible presence in the towns must be of the local police who is more likely to be operating with some support from the populace, a factor critical to the success of counter insurgency operations.

The major contributory cause of ferment in the North East (NE) has been the influx of refugees and infiltrators bringing in arms and weapons through the Indo-Bangla and Burma borders. The sensitive points have already been identified by the various intelligence reports.[15] The BSF has started fencing and flood lighting the NE border. They have also put check-posts, along the border, on alert following intelligence reports of increased targetting of Bangladeshi Muslims as 'potential' fundamentalists by the ISI. The measures adopted in Punjab more or less apply to the NE region too. Over and above securing the international borders, the vigil over the Bay of Bengal and the Arabian Sea needs to be stepped up in order to deny the infiltrators use of the sea route to dump arms in the region. In mid 1993 there were various reports of huge consignments of RDX and other explosives being brought into the country through the sparsely guarded coastline of Gujarat and Maharashtra. To counter this, the employment of agencies like the Coast Guard, Customs and the Indian Navy must be closely coordinated so as to ensure that maximum area

report mentioned a three-fold increase in the number of defence personnel deputed to this Centre since then and the creation of a post of Deputy Director, Military Support, to co-ordinate the military related activities.

A report titled "A National Security Strategy of Engagement and Enlargement" submitted by President Clinton to the Congress in February 1996, indicated that he had approved in 1995, a new Presidential Decision Directive (PDD) on intelligence priorities. Of the seven priorities highlighted by him, four relate to the CPI. These are:

(a) "Rogue States" whose policies are consistently hostile to the US.

(b) Countries that possess strategic nuclear forces that can pose a threat to the US and its allies.

(c) Command and control of nuclear weapons and control of nuclear fissile materials.

(d) Transnational threats such as proliferation of WMD, intentional narcotics trafficking, international terrorism and international organised crime.

The PDD laid down that the intelligence community must provide the policy-makers with "world-wide capabilities to detect, identify and deter efforts of foreign nations to develop Weapons of Mass Destruction and ancillary delivery systems."

The CPI, as it evolved after Operation Desert Storm, is based on the following premises:

(a) Earlier assumptions that conflicts not involving the USSR would be fought solely with conventional weapons are no longer valid.

(b) The first priority should be the prevention of the proliferation of WMD.

(c) Simultaneously, the protective capability of the US against WMD should be strengthened to make it clear to potential users that threats of use of WMD against the US would not deter it from the application of its military power in pursuance of its objective.

The CPI's conceptual framework called for a mix of the following measures:

(a) Persuading non-WMD states that "their security interests are best served through not acquiring WMD."

(b) Curtailment of access to technology and materials for WMD through export controls and other means.

(c) International action to punish violators with trade sanctions, exposure of companies and countries that assist proliferators and sharing of intelligence with other countries concerned over the problem.

(d) Reducing threats from WMD already in the hands of certain countries through agreements to destroy, inspect, convert, monitor or even reverse their capabilities.

(e) Retention of the political, economic and military capabilities to retaliate against those who might contemplate the use of WMD, so that the costs of such use be seen as outweighing the gains.

(f) Acquisition of military capabilities to seize, disable or destroy WMD, in time of conflict, if necessary.

(g) Acquisition of defence capabilities, both active (Theater Missile Defences-TMD) and passive (protective gear and vaccines), to minimise or neutralise the collateral contamination and enable the US forces to fight even on a contaminated battlefield.

In 1994, the Defence Secretary set up an inter-agency Non-Proliferation/ Counter-Proliferation Programme Review Committee (NPRC) chaired by the Deputy Defence Secretary to report on action required in respect of intelligence collection, battlefield surveillance, passive and active defence, counterforce capabilities, military support for inspections and export controls and counter-terrorism if any domestic or international terrorist group manages to acquire a WMD.

In its report, the NPRC suggested the following priorities in respect of future action:

(a) Detection and characterisation of biological and chemical agents.

(b) Detection, characterisation and destruction of hard underground targets.

(c) Detection, location and neutralisation of WMD inside (in the hands of terrorists) and outside US territory.

(d) Development and deployment of additional passive defence capabilities.

(e) Improvement in the collection and analysis of WMD-related intelligence.

b) At night there is intense patrolling and 'nakabandi'. Flood lighting of a large portion of the border has been carried out. Night vision gadgetry is used for night surveillance to defeat intrusions.

c) All movement is forbidden within 500 metres of the border at night.

d) Even during the day, only persons who are screened can go to work in the fields close to the border.

e) BSF is closely backed by the Army and entry to border areas across the defence perimeter is controlled at limited points of access.

However, well organised arms and drugs smuggling operations with the connivance of local political bosses and officials still continue to augment the supply of sophisticated weaponry and illicit drugs. In order to check this traffic across the Punjab border, the main financiers and marketeers who are known to be operating from Delhi and Bombay have to be exposed and brought to book. This is possible only if corruption and collusion is eliminated.

In J and K, the international border through the sub-mountainous regions of Kathua and Jammu from where the border is denoted by the Line of Control, facing Pak-held areas of J and K, the terrain gets more rugged and mountaineous. The measures in force for security of the border are as under.

a) A belt of 20 km or so along the border and Line of Control has been notified as a protected area under the J and K Public Safety Act. No outsider can go into this belt without permission.

b) Foreigners can be permitted only by the Government of India.

c) All adult males residing in the belt have to carry identity cards with their photographs.

political solution. In these circumstances the proliferation of arms and explosives is likely to continue. Therefore, the economic, social, demographic and psychological effects of the violent movements shall continue to prevail and effect the fragile balance of the societies in these regions and the Indian psyche in general.

PROPOSED MEASURES TO COUNTER PROLIFERATION OF ARMS

Proliferation of arms, weapons and Improvised Explosive Devices (IEDs) into India has taken place with specific motives and aims viz. subversion, terrorism, separatism and so on. Remedial measures to check their use are, therefore, not isolated from the measures to defeat the motives of those perpetuating this mass proliferation. Though interrelated, the remedial measures suggested here to counter such threats are not presented as a comprehensive solution to the problem of terrorism but limited in scope towards the topic under consideration i.e. to suggest measures to counter the threat arising out of massive proliferation of man-portable weapons and explosives due to clandestine trade and arms smuggling.

SEALING THE BORDERS

It has been established beyond doubt that, it is the induction of sophisticated weapons and explosives from across the border which has given the anti-national groups the capacity to coerce and terrorise the region through insurgency. The prerequisite to break this impasse is to put a stop to illicit crossings to and from Pakistan, POK, the Indo-Bangla and Indo-Nepal borders.

In Punjab the three districts of Gurdaspur, Amritsar and Ferozepur adjoin Pakistan for a total length of 550 km. This is undoubtedly the best guarded stretch of our border. The following measures are in force to check infiltration :-

a) During day the border is under surveillance through watch towers.

(f) Support for WMD-related arms control measures.

(g) Missile defence capabilities.

The study of the NPRC's report was followed by the setting up of the following committees:

(a) A Senior Standing Committee on Non-Proliferation and Export Controls to work under the National Security Council's (NSC) Inter-Agency Working Group (IWG) on the same subject.

(b) A Non-Proliferation and Arms Control Technology Working Group to work under the Committee on National Security of the National Science and Technology Council.

(c) A Counter-Proliferation Programme Review Committee (CPRC) consisting of the Defence and Energy Secretaries and Director, CIA.

The Congress authorised an expenditure of US $ 60 million on counter-proliferation programmes during fiscal year 1995 and this was followed by the drawing-up of a six year (1996-2001) programme called the Programme Objective Memorandum (POM), which is estimated to cost US $ 556 million, with the expenditure in the first year (1996) amounting to US $ 80 million.

The POM calls for concentration of funding and R & D efforts on the following four programmes during the six-year period:

(a) Detection and characterisation of chemical and biological agents. It envisages accelerated development of better quality sensors and their integration into existing and planned carrier platforms, emphasising man-portability and compatability with unmanned aerial vehicles.

(b) Detection, characterisation and destruction of hard, underground structures. This calls for "new capabilities including advanced sensors, enhanced lethality and penetrating weapons to address the need for better probability of target defeat, while minimising collateral effects and aids for advanced targeting and strike planning."

(c) Detection, location and neutralisation of WMD inside and outside the US. This envisages better means of identification and evaluation of source of threats, creation of the required force structure, strengthening protective measures at key military, economic and scientific facilities and at sensitive logistic nodes and joint training exercises for the US forces in order to improve their reaction capability.

(d) Development and deployment of improved passive defence capabilities such as protective suits, shelters, filter systems and decontamination technology.

NATO INITIATIVE

During the NATO summit of January, 1994, President Clinton called for a similar Counter-Proliferation Initiative by the NATO. Following this, the NATO set up a Defence Group on Proliferation (DGP) to be co-chaired by the US and one of the European members of the alliance in rotation.

It also adopted in May 1994, a conceptual paper on what should be the political-military approach to the problem and approved an assessment of the risks posed to the NATO by WMD proliferation. The DGP was asked to analyse the operational implications of the identified risks and suggest follow-up measures.

According to Mr. Perry's report to the Congress in February, 1995, "NATO is concerned about the continuing risks of illicit transfers of WMD and related materials, growing proliferation risks on NATO's periphery and the role of suppliers of WMD-related technology to states on NATO's periphery."

Referring to the role envisaged for Japan in the over-all scheme, Mr. Perry said: "The US and Japan are working to identify the theater missile defence capability Japan will need and to evaluate options for acquiring that capability in future years, including opportunities for co-operative programmes."

COUNTER-PROLIFERATION SUPPORT PROGRAMME

Amongst the steps taken under the CPI in 1995 was the approval by the Chairman of the Joint Chiefs of Staff of a Counter-Proliferation Missions and Functions Study, assigning responsibilities for the field commanders in different geographic regions of the world to counter proliferation and the creation of a Deterrence/Counter-Proliferation Capabilities Assessment Team to review the priorities.

On the recommendations of this team, a Counter-Proliferation Support Programme (CPSP) with the following priorities was adopted:

(a) Detection and characterisation of biological weapons and chemical weapon agents.

(b) Identification and destruction of underground targets and above ground infrastructure.

(c) Improvement of capability to detect and track shipments.

(d) Defeat of agents facilitating clandestine acquisition of WMD-related technology and materials.

Mr. Perry's report to the Congress on the activities of the Defence Department during 1995, which was submitted in March, 1996, referred to the following actions taken under the CPSP during the year:

ADVERSE EFFECT ON ECONOMY

Most business establishments such as the handicrafts, tourism, dry fruits and small scale industry in the affected areas, be it Srinagar, Anantnag, Doda Valley or any place north of Banihal Pass, have borne the brunt of insurgency. This near collapse of the economic activity in the state results in colossal loss of revenue to the state.

When terrorism was at it's peak in Punjab, the industrial output of the state which houses the Manchester of India - Ludhiana and big industrial towns of Jallandhar and Amritsar, reduced drastically. Penetration of the militant cadres in the education system of the valley and imposition of their writ has forced certain schools and colleges.

EXCESSIVE USE OF ARMY FOR INTERNAL SECURITY DUTIES

Due to the availability of large quantities of arms and explosives, the dimension of the problem of internal security in the country has assumed dangerous proportions. Internal Security has traditionally been Army's secondary role. Although the police and para military forces have multiplied, the Army has had to be deployed extensively in Assam, Nagaland, Manipur, Punjab and J and K in the 1980's and 1990's. The frequent and prolonged use of the Army on these duties has had a detrimental effect on the civilian - soldier relationship. This has resulted in lack of confidence among the people in the police, para military forces and more significantly the entire civil administration as a whole. This can prove detrimental to the development of society. Also, where a low intensity conflict (LIC) situation involves religious or such other emotive issues, there is a danger of whipping up of anti-army frenzy among the public. This was evident in Punjab after Operation Blue Star in 1984.

When viewed in isolation, they may not cause undue alarm. However, seen as a whole, over a period of time, they have indeed left an indelible mark on the fabric of the Indian society. In all probability the ongoing proxy war in J and K and North East is going to continue till the people of these regions accept a

has led to unprecedented violence. In Punjab where terrorism was believed to have been burried, the past again came afresh with Beant Singh's assassination in August 1995. The basic human rights for existence was under question. If one was fortunate to be spared the bullet or fragments of a bomb blast it was more luck than anything else since the terrorists were indeed targeting anybody and everybody. Freedom and human liberty have suffered at the hands of the elements of subversion. Militants in Kashmir have imposed bans on entertainment and general social life. Similar restrictions were witnessed in Punjab, while the Golden Temple was desecrated by using it as a hide out and a store house of arms.

The new generation growing in the midst of these turmoils would be the most affected. Indoctrination of the youth into the rank and file of the extremists is indeed the greatest loss to the state and the nation. The World Bank in a report on "The Wealth of Nations" has analysed 190 countries and points out that 64 per cent of the wealth of nations is human capital. It is this human capital that we are losing. The new generation could be more violent as their life has been in the surcharged atmosphere of guns and rockets with drastic reduction in educational facilities and interaction with fellow beings. This does not augur well for the Indian society in general and only a psychotherapist can say what damage has already been done.

Lack of Law and Order and Collapse of the Administration

In fact the efforts to impose the government's will through the deployment of large number of security forces against guerillas has been counter productive to some extent. Some innocents invariably get caught up in the crossfire. A bureaucrat quoted in *The Week* dated Feb 20, 1994 by Vijaya Pushkarna in the article "Living Death" just about sums up the helplessness felt by the common man. "We have a gun in front of us, a gun behind us. Anyone with a gun is supreme in Kashmir, whether he is in uniform or not. They are exempted from all rules, laws and civility."[14]

(a) The deployment of Specific Emitter Identifiers (SEIs) that would enable the identification and tracking of ships at sea that may be carrying Nuclear-Biological-Chemical (NBC)-related cargoes. The first set of SEI hardware was delivered to the US Navy for use on patrol aircraft in West Asia six months ahead of schedule.

(b) Speeding-up of the development of the helicopter-based Long-Range Biological Stand-off Detector System (LR-BSDS) that can detect aerosol clouds to provide long-range warning of the use of chemical and biological weapons. The objective was to have the first set ready for deployment six years ahead of schedule.

(c) Speeding-up of the development of the Joint Service Lightweight Suit Technology (JSLIST) for producing improved chemical protection suits. The first set was undergoing warm climate operational testing during 1995, two years ahead of schedule.

(d) Development of a capability for remote detection of chemical aerosols through multihyper-spectral sensors and exploration of innovative bio-detection technologies.

(e) Improving counter-force capability to identify, characterise and destroy above-ground hardened or underground NBC-related facilities of target countries such as factories, laboratories and storage sites and development of hardware and software for the accurate prediction and minimisation of the collateral effects of such counter-force destruction operations on the US forces employed for carrying out the strikes, the civilian population and the environment. The first set of collateral effects prediction hardware and software was delivered to the US European Command during 1995.

(f) During the fiscal year 1997, US counter-force capability would be further enhanced to enable it to better detect and destroy critical mobile targets such as mobile missile-launchers and nuclear weapons infrastructure.

(g) During 1995, NBC-related Explosive Ordinance Disposal Equipment for counter-terrorist use was deployed in several sites in the US and overseas "to heighten readiness and reduce response time". An additional set of nuclear EOD equipment was shipped to Europe "for pre-positioned forward storage."

Spelling out the direction of R & D efforts to enhance counter-force capabilities, Mr. Perry told the Congress in March, 1996: "Many nations are placing their critical military assets in buried facilities or tunnel complexes. Utilising its experience in nuclear effects and its field test facilities, the

Defence Nuclear Agency (DNA) is assisting the Service laboratories to improve the lethality of conventional weapons for attacking underground facilities. Innovative warhead technologies, not dependent on high explosives, are also being investigated as entirely new ways to destroy chemical, biological and nuclear materials and weapons. The DNA is developing advanced prediction models for the dispersal of nuclear, biological and chemical agents released into the atmosphere. The Air Force is exploring hypersonic weapons that, when used with real-time target acquisition and communications systems, can provide a means to quickly destroy mobile launchers for WMD."

Role of NATO, Japan and Australia

A meeting of the NATO's Defence and Foreign Ministers held in November, 1995, approved a report submitted by the Senior Defence Group on Proliferation (DGP) suggesting priority for the following capabilities:

(a) Improved collection of strategic and operational intelligence, including early warning data.

(b) Automated and deployable command, control and communications.

(c) Continuous, wide-area ground surveillance.

(d) Stand-off and point BW/CW detection, identification and warning.

(e) Extended air defences, including Theater Ballistic Missile Defence for deployed forces.

(f) NBC individual protective equipment for ground forces.

Referring to the USA's co-operation with countries in the Pacific region in the field of counter-proliferation, Mr. Perry's report for 1995 said: "In the Pacific region, US friends and allies have also recognised the growing security risks posed by proliferation. Some Pacific partners have also participated in – and will like to do so in the future — international coalition operations in which the presence of NBC weapons has been a factor. The US has been working with such key allies as Japan and Australia to forge common approaches to improving military capabilities and doctrine in the face of NBC risks."

Role of SOF and CIA

Under the CPI, the Special Operations Forces (SOF) of the US have also been assigned a role which has been defined as developing a capability "to contribute to deterrence and destruction operations by providing a precision strike capability against weapons, storage facilities and command and control nodes and to the collection of real time intelligence through their special reconnaissance capabilities."

international factor in the gun running operations being conducted against the country. The crew consisted of five Latvians, a former British military intelligence officer turned arms dealer and a New Zealander who had reportedly overseen the entire operations.

While the Latvians seemed to be mercenaries, the New Zealander Kim Davy and the British Officer Blaech were suspected to be part of an international arms and espionage network. During the investigations it was admitted by the former British military officer turned arms dealer that he had purchased the weapons in Bulgaria and taken them to Karachi. The plane had taken off from Karachi. While the International connection and conspiracy in the entire operation is being investigated, the Karachi factor has lent credence to the belief that Pakistan's ISI did indeed provide ostensible support to the arms dropping. The deadly arsenal[13] included :-

1. 238 AK - 47 and AK - 56 rifles.
2. 10 rocket launchers.
3. 81 anti - tank grenades.
4. 61 hand grenades.
5. 19792 rounds of ammunition.
6. 3840 rounds of 9 mm pistol ammunition.
7. 09 9 mm pistols with 14 magazines.
8. 890 assault rifles.
9. 01 telescopic sight.
10. 01 detonator box.
11. Revolver holsters and canvas pouches.

EFFECT OF VIOLENCE ON INDIAN SOCIETY

Personal Security and Human Rights of the People

The massive influx of weapons and explosives in Punjab, J & K, North Eastern hilly regions and other parts of the country

strength, it embarked upon diplomatic trickery and crafty political manoeuvring in order to internationalise the Kashmir issue while ostensibly providing support in the form of funding, arms and training to the subversive elements within India and organising infiltration of trained militants into India.

Having successfully propagated the fear among Kashmiris that "Islam was in danger" in India, Pakistan ensured that the vulnerable Kashmiri youth went to the indoctrination camps, Pakistanis had set up, thus skillfully transforming Kashmiri insurgency into an Islamic movement.

US Policy on Central and South Asia

Pakistan is strategically located at the trijunction of South Asia, Central Asia and the Gulf region. These regions are politically, economically and strategically important to the US. The Americans want stability in the Gulf for the safe shipment of oil, for themselves and their western allies.

Having emasculated the Iraqi regime in the Gulf War, containment of Iran is a major US aim. Iran also needs to be tamed to further US interests in the resource rich Central Asia. The long term American strategic interest dictates reigning in of China and Russia. To achieve these objectives, the US needed a 'strategic ally' - a role which Pakistan has been eager to play[12]. Pakistan's patron - client relationship with the US has weathered the storms of time. The US, in order to further its interests is ready to go to any extent, even close its eyes to Pakistan's declared nuclear programme, the acquisition of M - 11 missiles and ring magnets technology from China, Islamic fundamentalism, trans border international terrorism, the Islamic bomb and continues to pump in billions of dollars of military equipment and economic aid.

Delivery of Arms from The Sky : International Factor

The dropping of arms and ammunition by an AN - 26 aircraft that included assault rifles, rocket launchers, anti - tank grenades, pistols and ammunition, in a score of villages in Purulia district of West Bengal on the night of Dec 17, 1995 pointed towards an

Left uncovered or scantily covered in Mr. Perry's reports to the Congress is the exact role of the Counter-Proliferation Centre of the CIA in the CPI, apart from collection of intelligence. However, from a study of the proceedings of the various congressional committees and reports appearing in the US media, one could surmise with reasonable confidence that the centre would be providing a cover to military personnel deployed on covert actions against WMD facilities of target countries during peace time and co-ordinating the psychological (Psywar) operations against target countries.

The cover provided by the CIA centre would enable the President to circumvent the requirement of prior Congressional approval for sending the armed forces on operational duties abroad. Military personnel deputed to the CIA centre would be undertaking such operations as staff of the CIA and not of the Defence Department.

The Psywar role of the CIA centre would be to create opinion in the target countries against WMD, fund Track 2 diplomacy meetings through cut-outs of individual academics and non-governmental organisations working in tandem with the CIA and create misgivings in public mind in target countries about the safety of their WMD establishments through clandestine funding of NGOs taking up the matter.

The "International Herald Tribune" of September 14, 1995, carried a report filed by Mr. Jeffrey Smith of the "Washington Post" on a proposal under the consideration of the Clinton Administration to authorise the US intelligence agencies to expand the use of covert action in order to deal with international terrorism, narcotics smuggling and spread of WMD. It quoted Mr. John Deutch, Director, CIA, as telling the National Press Club at Washington on September 12, 1995, –"The USA needs to maintain and perhaps even expand covert action as a policy tool."

While he defined covert action as an intelligence activity to influence overseas events undertaken in such a manner that it could not be traced back to the USA, a generally-accepted definition of covert action is a clandestine, deniable action undertaken by an intelligence agency in foreign territory to achieve a national security objective, for which the use of the armed forces or traditional diplomacy would not be advisable or feasible.

In his authoritative study of 1989 on the US intelligence community (Ballinger Publishing Company, Cambridge, Massachusetts), Mr. Jaffrey Richelson, former Senior Fellow at the Centre for International and Strategic Affairs, University of California, Los Angeles, places the covert actions undertaken by the CIA in the past in the following categories:

(a) Political advice and counsel.

(b) Financial subsidies to individuals in a position to influence decisions in favour of the US and its policies.

(c) Financial support and technical assistance to political parties, private (Non-Government) Organisations, business firms and trade unions.

(d) Covert propaganda.

(e) Economic operations.

(f) Para-military or political action operations designed to support or overthrow a regime or defeat an insurgent force.

(g) Attempted assassinations.

After the Watergate scandal, President Jimmy Carter banned covert actions involving assassinations and overthrow of regimes through para-military means. President Ronald Reagan modified this order. While covert actions involving targetted assassinations continue to be banned, all other types of covert actions are permissible, with the prior approval of the Congressional Intelligence Oversight Committees which are informed in camera of the proposed operations and their approval obtained for incurring the necessary expenditure. In emergent cases, the President can order a covert action by the CIA in anticipation of Congressional approval, while keeping the committees simultaneously notified of his action. One of the covert actions reportedly approved by the Clinton Administration related to assisting Iraqi political exiles and the Kurds for overthrowing President Saddam Hussein of Iraq.

The US press had speculated in April, 1996, that one of the first covert actions under the CPI might be directed at a facility for the manufacture of chemical weapons which Libya was allegedly setting up in underground structures at a place 40 miles south of Tripoli. The speculation was triggered off by a remark of Mr. Perry at Cairo on April 5, 1996. Asked by pressmen whether the US would let the Libyan facility be completed, he replied: "I don't want to comment further on that, but the answer is no."

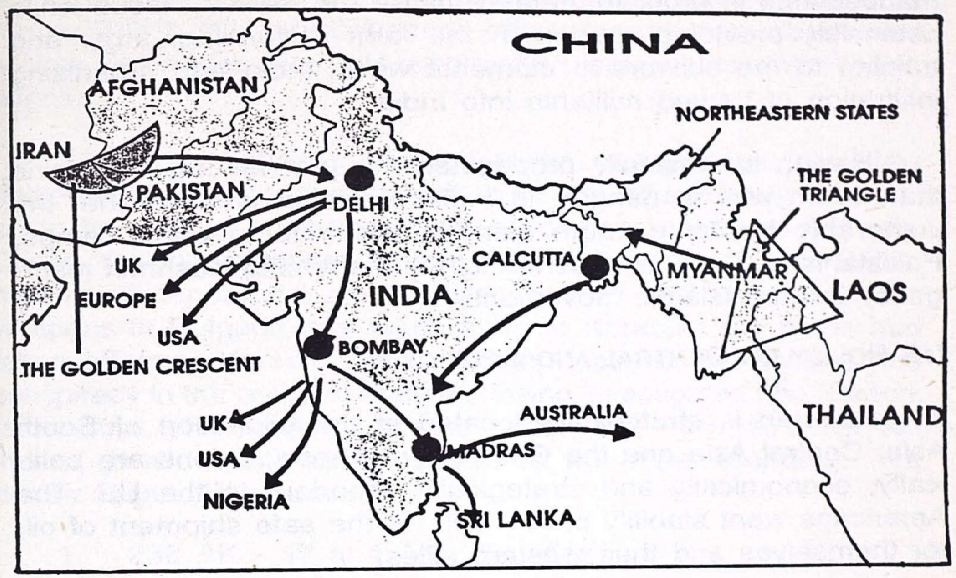
It is assessed that while the pre-emptive use of the USA's counter-force capability might be directed only against any WMD facilities determined by the US intelligence community to be coming up in North Korea, Iran, Iraq, Libya and Cuba, covert actions under the CPI against other target countries might be confined to the following:

(a) Sabotage of R & D efforts.

(b) Creation of demoralisation in the WMD establishments.

(c) Inspiring the formation of anti-nuclear and anti-missile lobbies and financial and technical support for them.

Table 7



*SOURCE : The Week * May 30 1993*

Proximity of golden crescent and golden triangle to the sensitive states of J&K, Punjab, Rajasthan and North Eastern Indian States.

The militant outfits in Punjab, Kashmir, Assam, Andhra Pradesh, Manipur and Nagaland need enormous amounts of funds and arms to sustain their ideological whims. They are easy preys to the unscrupulous drug traffickers. The old smuggling dons have switched to narco trafficking and sale of weapons. The Mumbai blasts in March 1993 and the involvement of smugglers and terrorist groups were pointers towards the nexus between them. The subsequent escape of the Memons to Pakistan exposed the links of the terrorists with Pakistan.

HISTORICAL, RELIGIOUS AND ETHNIC INFLUENCES

Kashmir being the core issue, Pakistan has gone to war thrice against India without much success. Having tested military

come to the fore. The porousness of the Indo - Nepal border being exploited by Pakistan for organising and supporting militancy in the states of J and K, North Eastern India and other parts of the country. In July 1996, after the arrest in Kathmandu of some Pakistani nationals engaged in arms smuggling, the Nepalese police recovered huge quantities of RDX and country made weapons, meant for Pakistan undercover agents. Through them these were to be routed to the militant groups operating in Punjab, bordering districts of Rajasthan, Mumbai and the Terai regions of UP. Pakistan has begun to sell arms and weaponry to Nepali muslims settled along the Indo - Nepal border with the aim of fanning the fundamentalist sentiments in this hitherto peaceful region. Intelligence agencies have confirmed that country made bombs and weapons were supplied to Maoist terrorist groups active in the Terai region and in Reopa, Dolpa, Gorkha and Syangza areas of Nepal.

FUNDING OF ARMS THROUGH DRUGS PROFITS

It is not possible to control the spread of arms without an effective control over drug trafficking and money laundering. The major production and trafficking complexes representing the world's most successful illegal narcotics enterprises are the Golden Crescent comprising Afghanistan, Iran and Pakistan and Golden Triangle of South East Asia comprising Cambodia, Laos, Myanmar and Vietnam. The disturbed conditions on the fringes of India in the North West and North East, which are geographically close to these narcotics areas of the world, serve as an ideal backdrop for proliferation of drugs and the arms trade. (Table 7)

Drug profits have penetrated Pakistan's highest political circles and are entrenched in the Pakistani economy. The scene is worse in Afghanistan, whose internal politics have its echoes in India. The massive poppy cultivation and trafficking are a legacy of the Afghan war when the US funnelled billions of dollars to support the Afghani militia to fight the Soviets. Most of the money and arms went into wrong hands and trafficking in drugs and weapons thrived. It was boosted further by a devastated rural economy where the only source of income was poppy cultivation.

(d) Creation of fears about nuclear and missile safety through the planting of articles in the printed media and programmes in the audio-visual media and through NGOs funded by the CIA.

NEW WEAPONS

Also not covered in Mr. Perry's reports is the funding by the Defence Department of the development of non-lethal (to human beings) chemical and biological weapons, micro-nukes which could be used to control regional conflicts not involving any of the nuclear powers and a Nuclear-Driven Radio Frequency (NDRF) warhead which can paralyse computer networks, telecommunication and power transmission systems over a wide area in the target country without causing any damage to human beings and other infrastructure.

A study titled "Setting Precedents in Anarchy: Military Intervention and WMD" published in the Spring 1996 volume of the "International Security" brought out by the Massachusetts Institute of Technology gives details of the direction of the new R & D efforts. Amongst the new weapons under development are:

(a) Bio-deterioration agents, which are genetically-engineered microbes to attack infrastructure or equipment. They can eat substances such as rubber, concrete and metal.

(b) Bacteriological agents that can affect combustion by contaminating the fuel and weakening or destroying the lubricating ability of oil.

(c) Anti-traction chemical agents for contaminating fuels, supercorrosives and supercaustics.

(d) Metal embattlement chemicals which can render metallic surfaces of aircraft, missiles etc weak or brittle.

(e) Nuclear-driven Radio Frequency(NDRF) war heads, which, when exploded at a height of 50 to 100 kms over the target area, would create an intense electro-magnetic field disrupting all command and communications equipment, computer networks, electrical power grids and telecommunication systems within a radius of 1,000 kms without any radiation, fall-out or other collateral damage at the ground level.

IMPLICATIONS FOR INDIA

A careful study of the CPI policy statements of senior US officials indicates that they envisage the use, if necessary, of their counter-force capability for destroying WMD- related infrastructures mainly against the so-called

rogue states and not others such as India and Pakistan whom they do not view as hostile to their interests.

Presently, they are confident of countering any WMD-related activities by India through diplomacy, denial of technology, export controls and psywar.

If these conventional counter-proliferation methods fail and if they apprehend that India's efforts would be detrimental to US interests through actions such as sharing by India of knowledge, technology and materials with States hostile to the US, they may undertake covert sabotage actions directed against our scientific and other related establishments.

Sleeping agents, who may be eventually required for such covert sabotage actions, have to be identified, recruited, trained and placed in position much in advance. It would, therefore, be reasonable to assess that efforts towards the recruitment and placing of such sleeping agents would be under way even now.

Sleeping agents are of two categories — humans and material in the form of equipment supplied by them for our sensitive installations. Presence of US and other Western companies in the running of telecommunication services in areas where sensitive establishments are located would facilitate such sabotage operations.

It is for this reason that China, which opened up its economy to foreign investment in 1979, has been resisting pressure from the US to open its telecom services to foreign participation. Where it has allowed joint ventures with foreign participation such as in the production of telecommunication equipment, it has ensured that the Chinese company in the joint venture is clandestinely owned and controlled by either the armed forces or its intelligence agencies. There has been a large number of such ostensibly private companies, which have been actually floated by the armed forces and intelligence agencies, to act as joint venture partners in sensitive fields.

If this has not already been done, it is time to have an in-depth study of the implications of the USA's Counter-Proliferation Initiative and Counter-Proliferation Support Programme for the security of our scientific, military and other infrastructure and initiate action for enhanced protection.

Simultaneously, it would be advisable to assess the present capability of our intelligence agencies, particularly the Research and Analysis Wing (R&AW), for the collection of intelligence and advance warning data relating to threats to our scientific, military and other infrastructure and initiate action to strengthen it.

divisive forces which have been fanning their ideology and arming them to the teeth.

Though Pakistan has been supplying arms and weapons through the porous Indo-Bangladesh border since long, the recent reports of the Army Intelligence reveal that Pakistan's ISI is choosing muslim fundamentalists among Bangladeshi refugees to disrupt the civil administration in the region particularly in the state of Assam. ISI in recent past is believed to have sent a large number of huge arms consignments to the region. These are mainly for the Nationalist Socialist Council of Nagaland (Issac Muivah faction) while some of them intercepted by the Army in April-May 1995 belonged to United Liberation Front of Assam and Manipur's Peoples Liberation Army (PLA). It can be recalled that Bangladesh Navy intercepted a ship carrying large number of weapons belonging to NSCN (IM) on 29 March 1995 off Cox Bazaar coast and seized weapons ranging from AK assault rifles to rocket launchers.

THE ROUTE FOR ARMS MOVEMENT IN THE NE

Supply of arms to Indian insurgents in Bangladesh is mostly controlled by Jamait-i-Islami, an Islamic Muslim fundamentalist political party. The weapons bought by the insurgents from the Jamait-i-Islami originate mostly from Iran and some from South East Asian countries like Thailand. However, these are not brought by Iranian ships or nationals. Private ships are used to carry the arms to Cox Bazar in Bangladesh or at Takraf located south of Cox Bazar. Further movement of arms from Bangladesh is the responsibility of the concerned outfits. Couriers for insurgents use Dawki sector as it is virtually unguarded. The river Dawki divides India and Bangladesh and one can easily cross the border. The Imphal-Dimapur-Shillong-Nongthymai-Dawki route is mostly used by couriers. NSCN couriers are known to use the old Shillong - Sylhet road to reach Dawki via Pymirsia--33 kms from the border.

USE OF NEPAL

Though Nepal is relatively a quieter region of South Asia, the indication of spill-over of the separatist elements into Nepal has

	KCP	: Kangleipak Communist Party.
	PREPAK	: People's Revolutionary Party of Kangleipak.
	KYKL	: Kanglei Yaol Kamba Lup.
	HPC	: Hmas People's Convention.
	AMSU	: All Manipur Student's Union.
Nagaland :		
	NSCN	: National Socialist Council of Nagaland (Isaac Muivah Faction).
Assam :		
	ULFA	: United Liberation Front of Assam.
	AASU	: All Assam Students Union.
Cachar Hills :		
	CHPF	: Cachar Hills People Federation.
Meghalaya :		
	HALC	: Hill Area Legislative Council.
Mizoram :		
	MZP	: Mizo Zairlei Pawl (Mizo Students Union).
	Chakmas	
Tripura :		
	ATTF	: All Tripura Tiger Force.
	TUJS	: Tripura Upjati Juba Samity.
	ATBVF	: All Tripura Bengal Volunteers Force.
	NLFT	: National Liberation Front of Tripura.
	TNV	: Tripura National Volunteers.
Amra Bengali :		
	A regional outfit of Bangladeshi refugees.	

The religious, ethnic and historical perspectives of the people living in sensitive border towns make them vulnerable to

India's Foreign Relations Part III - Relations with the Far East, the Middle East and South–East Africa

SAHDEV VOHRA

INTRODUCTION

Besides India's relations with the Super Powers and with her neighbours, India's relations with the Far East, the Middle East and with African countries on the Indian Ocean littoral are important. Central Asia has been a cauldron of the human race from where migrations have taken place over the ages to Asia and Europe, leading to the settlement of the Aryan race here, followed by the inroads of the Mongol, Hun and Turkish races over these regions as well as of the Scythians, Parthians and the Yuch-Chi or Kushan. Foreign relations of India with West Asia and Central Asia have been an integral feature of India's history. Trade was carried on with countries round the rim of the Indian Ocean since the earliest times and the Harappan civilisation of India had traded with Gulf countries. Arab sailors learnt to sail to India and further east, taking advantage of the monsoon winds, and traded with Malabar coast from Oman, and from the ports of Somalia in East Africa.

The Arab traders extended their trade with Sri Lanka and to the East Indies and China. They superceded the Indian migration of earlier times there, that had led to the establishment of Kingdom of Sumatra, Bali and of Champa in Indo-China. These intimate relations and spread of Indian civilisation in the Far East are a background on which India can build and recreate relations.

RELATIONS WITH THE FAR EAST

INDONESIA

The world war created a swift and sudden change in the map of the Far East when Japan attacked the region in 1942. The effect of their invasion was the unexpected collapse of the Western empires there like a house of cards. The Dutch in Indonesia, the French in Indo China, the British in Malaya were

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swept out of their dominions. In Indonesia Sukarno declared independence in 1945 and the Dutch evacuated finally in 1949. In 1955 Indonesia organised the non-aligned countries' conference of Bandung. It was attended by Nehru, Chou En Lai, Nasser and other leaders of the Non-Aligned Movement. This was a set back to the Dulles plan of organising non-aligned countries into a bloc of U.S. allies against the USSR and Communism. Nehru was responsible for helping Sukarno in his revolt against the Dutch when he sent Biju Patnaik to rescue Sukarno by air on one occasion. But after India's defeat in the border conflict with China in 1962, the image of Nehru was tarnished. Subsequently, Suharto replaced Sukarno and followed a policy of accepting help from the West. Being an oil-producing country, Indonesia joined the OPEC group of countries, which hitherto was a club of oil producers of the Middle East and Arabs. Indonesia has rich rain-forests and other resources. In 1973 Suharto took over Portuguese East-Timor, a step which has not yet been recognised by the United Nations.

Although a country with a large number of islands, Indonesia has developed a common language (Bhasa) and a unity which is remarkable. It is a country with the third largest population in Asia and its development has lately been fast, both in the economic field and in the social goals like education, public health and welfare of the people.

ASEAN

The countries of the Far East now forming the Asean group of nations belong to the Shan race of people, as distinguished from the Han race of the Chinese people. These countries comprising Thailand, Malaysia, the Philippines and Indonesia have successfully developed an economic union and a common set of rules in the commercial field. All of them have established stable political regimes and welcome foreign investment and technology, undeterred by any phobia of foreign control. Their liberalisation of trade and economy has suited a world economic system which is getting more and more integrated and in which economic unions of regional countries are becoming a marked feature. India has the advantage of the presence of communities of Indian origin that have existed here since the colonial period, and which have prospered after the process of decolonisation. Industrial goods from India have also found a market in these countries.

However, there have been some negative features in India's relations with Asean countries. The worsening of relations of India with China and Pakistan have been viewed with watchfulness. China is a nearer and powerful neighbour, and in respect of Pakistan, the largely Muslim population of Asean countries have not always been given a fair picture of the Indian side of the

b) Lack of effective governance and delayed or no redressal of issues.

c) Presence of various ethnic groups and economic exploitation of the people.

d) Large scale migration of refugees from Bangladesh. A recent study conducted by the American Association for the Advancement of Science and Canada's University College of Toronto says that the failure of Bangladesh to check its population and highly inequitable land distribution system have led to massive migration of refugees to India's bordering states causing tensions and violence. Over ten million Bangladesh migrants have settled illegally in India. Apart from the general administrative apathy towards the refugee problem leading to unrest, large scale unemployment, low industrial and infrastructural growth has resulted in low economic activity despite export of tea, minerals and large reserves of oil. However, an Indian intelligence report quoted in the NE, *Sunday,* June 15-30 1996, states that India sees the migrants as a potential security risk. It indicates that illegal migrants are easy to be used for smuggling, trans-border gang warfare and information gathering for the extremist groups. Exploiting the grave economic status of these refugees, the ISI presently and China in the past were instigating and arming them to cause violent disturbances.

The influx of migrants from Bangladesh, lack of governance, poor economic progress and feeling of deprivation are among the common issues that have besotted the North East. Their different cultures, language, customs and ideologies have often ignited various movements in the region. These migrants have become a powerful political and economic force in Assam and the neighbouring states. This is a live issue even now. Following is the list of some groups active in the North East :-

Manipur :

UNLF	:	United National Liberation Front.
PLA	:	People's Liberation Army.

1. 107 mm rockets.
2. 80 mm mortars.
3. 90 mm automatic grenade launchers.
4. 57 mm modified helicopter rockets with sophisticated timing devices for delayed firing of barrages of rockets.
5. AK-47 assault rifles.
6. AK-56 assault rifles.
7. Pistols of Soviet and Chinese origin.
8. Long range sniper rifles and revolvers.
9. Machine guns.
10. Stinger SAMs - supplied by the ISI to Kashmir terrorists, since mid 1994.
11. Tube launched anti tank missiles.
12. Digital burst communication systems.
13. Frequency scanning devices for detecting and homing in on coded and military type broadcasts.
14. Hand Grenades.
15. Land mines.

While the exact number of the weapons and systems are not known, the scale of the proliferation can be gauged from the number of seizures of weapons recorded in a sample period of 1990 to 1992 as under :

1. 7851 AK series rifles.
2. 8048 grenades.
3. 474 machine guns.
4. 455 rocket launchers.
5. 1625 mines.
6. 2616 pistols and revolvers.
7. 9,04,329 pieces of ammunitions.

Supply of Arms to the North East (NE) Subversives

The North East region of the country has been simmering. It may be attributed to :

a) The people's discontent due to feeling of neglect from the mainstream.

dispute over Kashmir. India has to build on the base of goodwill of these countries by her closer relations with them which have not always been fostered with the attention they deserve. Despite its initial success in economic planning and its secular, democratic system of government, India has lost in the race of economic development whereas the Asean countries are an example of brilliant success. Foreign relations are a function of moral leadership, as well as of mutual cooperation, and of benefit through trade and joint business ventures, besides pursuit of policies of peace and security. Taking this into account, India's relations with the Asean countries have lately taken a turn for the better.

Vietnam

Coming to individual countries, Vietnam's struggle against France, and later against USA was to last till 1973 and caused untold suffering and destruction. The same struggle was extended to Cambodia and Laos. Vietnam has shown a remarkable capacity to stage economic recovery. Vietnam's relations with China were unfriendly in the 1970's due to border disputes as well as their rival claims over the Paracel and Spratley group of Islands in the South China Sea. These are reported to contain valuable oil and gas deposits. These islands are in fact a cause of dispute among several of the other Asean countries with China, including the Philippines, Brunei and Indonesia. In 1995 there was a dispute between the Philippines and China over the claim made by the latter on one of the innumerable remote islands that constitute the group. China declared also that its geographical sway extended over a large part of these islands as its "Blue-Water" territory. All concerned countries have to exercise the choice of a peaceful settlement.

Malaysia

Malaysia had close contact with India in the days of British rule when a large Tamil population was engaged in the rubber plantations and in mining industry. The descendents of these migrants are an integral part of the population both in Malaysia and Singapore. A tolerant and progressive people, the Malaysians have absorbed even larger Chinese population. The industrial and economic progress achieved has been a marked feature of the country. With Malaysia, as with the other Asean countries, India has a record of good relations, and expanding industrial and trade cooperation.

Australia and APEC

Australia is keen to expand trade with the Asian neighbours including India. In the present ambience of economic unions, USA has initiated a Pacific

Asia region, and spelt out its ideas of closer economic ties among all countries on the Pacific Ocean rim. India will have to take note of these developments. Already India has been invited to Asean to attend its meetings. India will have to pay greater attention to relations with the Pacific rim and its member countries than it has done hitherto since the political and economic conditions are favourable for such participation. It is up to the Indian entrepreneurs and business community to compete in the open Pacific markets, and to expand their exports in these neighbouring countries where they have advantage in saving transport costs, and where Indian products are likely to be more suitable because of similar climatic conditions.

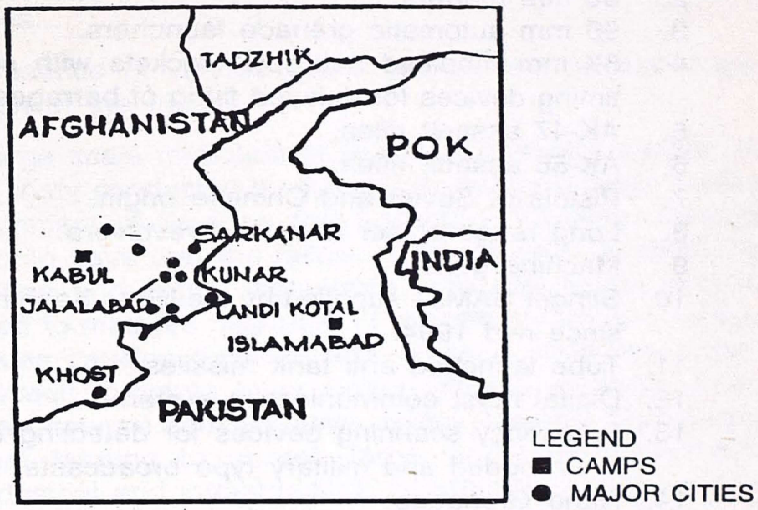
RELATIONS WITH THE MIDDLE EAST

The Arab world emerged from Turkish rule after the First World War and formed by the Allies into the independent states of Iraq, Syria, Palestine, Lebanon and Jordan. Egypt also emerged from British rule. Mahatma Gandhi put India's relations with the Middle East in a clear perspective after the First World War when he supported the Khilafat movement and espoused the cause of the Arabs in Palestine against the decision of Britain to create a homeland for the Jews in Palestine.

A major event in the Arab World was the discovery of the world's biggest oil deposits around the Persian Gulf region, in Saudi Arabia, Kuwait, Iraq, and Iran. The picture of Arabs as beduins and desert people was transformed into one of rich kingdoms controlling the vital oil supplies needed by the industrialised world of the West, including USA after the Second World War. But in 1948, a contrary factor was introduced when with President Truman's active mediation, Israel was declared an independent state. USA had become a cause of dividing the Arab powers and Iran into those who supported USA and those - the vast majority - who treated USA as having betrayed the Arab people. The situation was complicated when the USSR first started giving arms to the Arab state and later when the USSR in 1959 agreed to finance the High Dam at Aswan in Egypt.

India as a leading member of Non-Aligned Movement sided with Iran when Mossadeq nationalised the oil industry in 1953. The US thereafter increased their investments in the Saudi Arabian oil industry, thus dividing the Islamic World into two camps. Later, Yasser Arafat kept closer relations with Nehru over a common stand against the pro-Israel stand of USA against the Palestinian interests. Thus the relations of India with the Middle East were warm and friendly. The prosperity derived from sale of oil resulted in modernisation of the Gulf Emirates and the migration of skilled labour from India and Pakistan besides other countries. This enabled them to earn and send foreign exchange to the mother country.

Table 5 : Training Camps - Afghanistan

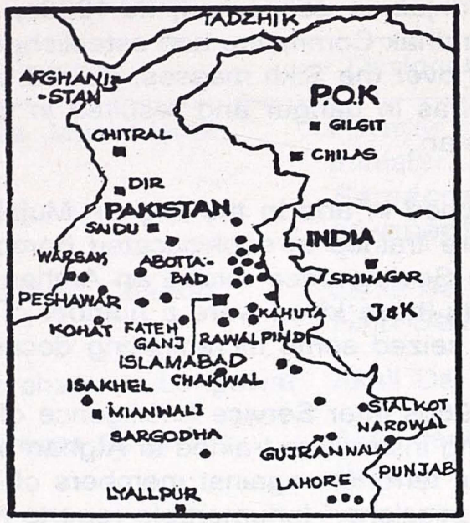


Source : The Week ■ Oct 8, 1995 p. 40

funnel in large quantities of weaponry for the Mujahideen. The US CIA procured the weapons and Pakistan's ISI served as a conduit. But with neither enforcing control on distribution, the Mujahideen had a free run encashing their weapons in the arms bazars of NWFP, for their clandestine activities. Majority of the weapons found with Punjab and Kashmir militants from the Afghan pipeline are from the stock still controlled by the ISI.[9] The arms entering into Kashmir from Pakistan have had a major impact on the scale and severity of the conflict.

The report published by the Committee of International Security Studies of the American Academy of Arts and Sciences reveals that shipments of arms are facilitated or sent directly by ISI. It discloses that in 1983 about 10,000 tons of weapons were transferred to Afghanistan via Pakistan, it shot up to 65,000 tons in 1987.[10] With the Soviet withdrawal from Afghanistan, not only have the arms bazars been flooded with these sophisticated weapons, flood gates into Kashmir, Punjab and North Eastern Indian states also have been opened. Confirmed reports and the various seizures indicate that following weapons and systems have found their way into the hands of terrorists[11] :-

Table 3 : Training Camps - Pakistan



Source : The Week ■ Oct 8, 1995 p. 40

Table 4 : Training Camps - P.O.K.



Source : The Week ■ Oct 8, 1995 p. 40

The Pakistan propaganda in the Middle East and among the Muslim countries generally has tended to paint an anti-Indian picture over Kashmir, presenting it as an anti-Muslim state. The organisation of Islamic Countries (OIC) was utilised to confuse the issue as one of Islam rather than as a political one, forgetting that India had a larger Muslim population than the entire population of Pakistan. Generally these countries have not been deluded and recognised that India was a secular state, and have given support to the stand that the dispute should be settled bilaterally by negotiations.

A notable development in the Middle East recently has been the use of what has been called "Fundamentalism", a word which needs to receive a more precise meaning, ever since its association with the Khomeni Revolution in Iran in 1979. The word was first used in respect of the support given by Iran to the Shias in South Lebanon against the Israeli occupation. The conflict between the Shias of Iran on annual pilgrimage to Mecca and the Saudi Arabian authorities was attributed to fundamentalism and revival of antipathy between the Shias championed by Iran and the Sunnis whose cause is espoused by the rulers of Saudi Arabia as custodians of the Holy Shrine. However, when Afghanistan was invaded by the Russians in 1980, the mujahideen who flocked into Afghanistan to carry on the 'holy war' against them, were trained by Pakistan in the neighbouring border areas, and after the war the mujahideen trained and indoctrinated for a holy war everywhere and equipped with the lethal arms and equipment supplied by the USA for the war in Afghanistan. These were also called fundamentalists, to misdirect their undoubted spirit of self sacrifice to spread terrorism in places as far apart as the Kashmir Valley, the New York Trade Centre, and the Philippine Islands, and several other targets which were chosen and manipulated by leaders who exploited the idealism of these mujahideen into destroying targets human, institutional or religious, indiscriminately. The phenomenon had a direct repercussion when the ISI of Pakistan directed the mujahideen to operate in the Kashmir valley.

On the economic front, India has retained her position in the Middle East, and taken part in the construction of railways, roads, and industrial projects in Iraq, Libya and Saudi Arabia. There are opportunities for setting up industrial ventures in these countries for exploitation of the oil resources and laying of pipelines for export of gas and oil, and for setting up refineries. These are more likely to be handled by government agencies and it is, therefore, important that our foreign relations are geared to this direction. The war between Iran and Iraq from 1980 to 1987, and the war threatened in 1990 by Iraq on Kuwait show the hazards of war in the Middle East. The Arab world was divided by the war over Kuwait and USA launched an attack on Iraq. The Iraq army had to face the attack on the border with Kuwait by tanks and massive aerial bombardment. The war was over in a week. It revived the

morale of the US army after its debacle in Vietnam. India's interest lay in limiting the war and making the peace less punitive. The consequences of this war are still being felt.

The problem of the Middle Eastern countries is in fact the question of being masters of their oil resources and to utilise their oil earnings to raise the standard of living of the people. That is why India has supported the national reassertion by countries of the region. The technology and resources provided by the Western oil interests to develop the oil industry cannot be made into a sufficient excuse for master minding the exploitation and utilisation of these resources in the foreign interest. The Middle East was responsive to Communism at one stage not because of a belief in its "theology" but because it seemed a way out of the tight hold of the western powers over these resources. Now that the banner of communism is down, the countries have raised the banner "fundamentalism" against exploiting powers to keep their hands off.

RELATIONS WITH IRAN – AFGHANISTAN – CENTRAL ASIA

AFGHANISTAN

Afghanistan loomed large in the policies of the British rulers in India. The threat from the north seemed real when Napoleon was advancing into Egypt, and later when Russia expanded into Central Asia. This does not concern India so long as Gilgit and the Northern Territories (as named by Pakistan) forcibly occupied by Pakistan in 1947 from the state of Jammu and Kashmir, stay with them.

Another problem is the Durand Line which divided the Pakistan tribes into two portions, one within Afghanistan, and the other now part of Pakistan. This haunts Pakistan and her policy towards Afghanistan, ever since the Pakhtunistan movement earned the support of the rulers of Afghanistan. The problem is difficult since to unite Pakhtuns is to disturb the national frontier between these two countries. India was a market for the sale of dry fruits, carpets, and other produce of Afghanistan. But this market has dried up because of the hostile policies of Pakistan towards facilitating this trade.

A third problem is that large scale opium plants are grown in the area. India is being used as one of the surreptitious routes for opium smuggling to International markets. Afghanistan is in need of non-interference to enable the various tribes and ethnic groups to work out a government, strong enough to manage the warring and unruly tendencies. India is unable to exercise its good offices because of the blockade that Pakistan has created around access routes from India.

EXPLOITATION OF THE POLITICAL CLIMATE OF BORDER STATES

As far as Punjab is concerned, in 1980s, the Shiromani Gurudwara Prabandhak Committee had established tight religious and social control over the Sikh masses, played on the fear that the Sikh identity was in danger and resulted in the demand for a separate Khalistan.

Pakistan stepped in and in the Afghan Mujahideen camps, Sikh terrorists were trained in sophisticated bomb making techniques. When the Soviets once raided an Afghan training camp in Pakistan, among those killed were a number of Sikh trainees. The Soviets also seized some incriminating documents.[6]

By the mid-1980s Inter Service Intelligence of Pakistan (ISI) had started sending instructors trained in Afghan camps to India, to organise acts of terrorism against members of Indian government and foreign missions.[7] Innumerable reports have appeared in media declaring unflinching evidence pointing towards direct involvement of Pakistan's ISI in abetting and sponsoring terrorism in India'.

The Report of the Task Force set up by the US House Republican research committee on 'Terrorism and Unconventional Warfare' confirmed that the weapons and materials provided to the Kashmiris were identical to those provided by ISI to Afghan Mujahideens. The Report said that in 1992, ISI was operating 13 permanent, 18 temporary and eight joint training camps for Kashmiris.[8] There are numerous training camps operating with support from Pakistan, proof regarding which has been established beyond doubt. (See Tables 3, 4 and 5 for the training camps for Kashmiri militants in Pakistan, POK and Afghanistan).

WEAPONS INFLUX

The Afghan Arms Pipeline

Weapons for the terrorists were never a problem, due to breaches in the 'Afghan Pipeline' that the US had created to

Table 2 : Assassinations in Punjab (1981 - 1995)

Date	Person	Designation/Post
Sept 1981	Lala Jagat Narain	Former Congress (I) minister, editor of *Hind Samachar* group of newspapers.
May 1984	Ramesh Chandra	Janta Dal leader, editor in *Hind Samachar* Group.
Aug 1985	Harchand S Longowal	Akali Dal President.
Jun 1990	Balwant Singh	Akali leader and former Punjab Finance Minister.
May 1991	Harbhajan S Sandhu	General Secretary of Akali Dal (Badal).
Aug 1995	Beant Singh	Chief Minister, Punjab.

The North East region has been simmering and faces fresh threats of subversion as intelligence reports indicate designs of the Bangaldesh refugees rearming themselves.[3]

Scale of Terrorism : State Sponsored Arms Transfer

Sponsoring seperatist subversion in India has been a crucial component of Islamabad's long term military strategy since the 1970s. The training it imparted to Sikh ultras and other Indian secessionist groups was part of Zulfikar Ali Bhutto's tactics of 'forward strategic depth'. To him, Pakistan's lack of strategic depth and early warning capabilities could be compensated by sponsoring terrorism and subversion. The terrorists and the Pakistan intelligence agents among them, would be able to warn of any impending attack. In the event, the terrorists would launch a guerilla war against the Indian Army on Indian soil before it could reach the border, giving the Pak Army a definite advantage over their rivals.[4&5]

Afghanistan needs trade routes with Uzbekistan, Tajikistan, Iran and India. These can operate only when the civil war ends. Before the Russian invasion, Afghanistan received aid from Germany, Russia and Britain to establish its arterial roads from Kabul to the North, and to Herat, Kandher and Jalalabad in the West, South and East respectively. Textile Mills were established in the North by the USSR. India built a hospital in Kabul. King Zahir Shah had encouraged education and one could see in his reign in the 1960s, girls in school uniforms marching every morning to their schools. Indian teachers and engineers worked in Afghanistan in those days and trade with India flourished. All these developments are now a thing of the past. Restoration of peace in Afghanistan is essential before development work is resumed.

Iran

Like Afghanistan, Iran was the object of Anglo-Russian rivalry in the Nineteenth Century. The British occupied the Island of Fao at the mouth of the Shat-el-Arab after an invasion of Iran in the 1830's. At the same time, Russia occupied parts of Northern Iran. Iran emerged from the shadow of this Anglo-Russian rivalry, in 1907 when Russia and England entered into a detente and undertook not to interfere in Iran.

The Kajal dynasty tried to introduce Western system of education. But the country already had an Islamic system of madarsas which was strongly entrenched. Youngmen from the upper classes were sent abroad to absorb the western way of life. But the army remained largely a personal bodyguard of the Shah, and the Shah introduced an all-enveloping system of espionage so that Iran became a closed and secretive society.

Iran's position in the international politics was transformed by the discovery of oil. It was owned by Anglo-Iranian oil company. Later the Americans came to hold a predominant interest in Iranian oil industry. In 1953 the Pahlavi dynasty was dethroned by the visionary fanatic Mossadegh who, nationalised the oil industry. The American CIA brought about the fall of Mossadegh and restored the Shah to his throne. But Mossadegh became a prophet.

Independent India revived relations with Iran. They decided upon joint schemes for a steel plant in India. Iran, concentrated more on common economic plans with Turkey and Pakistan. Pakistan was helped by Iran to acquire US aircraft, the sale of which had been banned by USA after the Indo-Pak war of 1965. It was only when President Rafsanjani came to power, Iran changed its stand in favour of India. In 1995 the Iranian President visited India and praised its secular policy where all religions flourished. He advised the Indian

Muslims not to use the Babri Masjid issue for propaganda purposes. In 1994 Iran had taken a stand against the attempt by Pakistan to introduce a resolution in the UN Human Rights Commission over Kashmir. While holding the view that the two countries should ascertain the views of the Kashmiris, Iran advised them to settle the dispute bilaterally.

To the Central Asian Republics, Iran offers an outlet to the Sea. While on his visit to India, the President of Iran signed a Tripartite agreement with Turkmenistan and India. The agreement provided for a road from Turkmen Republic to the Persian Gulf for transport of goods from and to India through Iran. A pipeline project which had been under consideration since long for supply of oil and gas from Iran to India via Pakistan was revived.

Iran feels that South Asia should be seen as a geographical unit for economic development. It takes a longterm view of Asian cooperation among India, Pakistan, China and Iran to evolve Asian solutions to Asian problems.

INDIA AND CENTRAL ASIAN REPUBLICS

The future of Central Asia has been transformed by the break-up of the USSR in 1990 and the several independent states that have been formed – Uzbekistan, Kazakhstan, Kirghistan, Tajikistan and Turkmenistan. They are seeking alliances to find outlets for their exports and for imports of their essential needs. Due to long association with Russia, their communications were developed through the North. Being landlocked they need new lines of communication to the sea towards South as well as through China on the East and Turkey on the West. Turkmenistan is anxious to construct pipelines for its enormous gas deposit. Located on the Caspian Sea, its oil and gas reserves are part of the biggest oil resources in the world next to those of the Persian Gulf region. Uzbekistan is a producer of cotton on a large scale. They need to develop railway lines, pipelines and to find alternate markets. Iran had offered to allow Turkmenistan transit through her territory to the Arabian Sea.

China has a large Muslim population in Sinkiang as well as in the provinces in the neighbourhood where the Muslims predominate. China has moved rapidly to conclude trade and frontier agreements with her neighbouring Central Asian States, namely, Kazakhstan, Kirghistan and Uzbekistan with which it has common borders. As far as India is concerned, Jammu and Kashmir adjoins Central Asia, but the Ladakh (Leh) route through Karakoram Pass to Yarkhand has been closed by China. Pakistan having occupied Gilgit and Baltistan, the route through Hunza to Sinkiang is in Pakistan's occupation. Central Asia is not in a position to import and export through India at present through these routes.

DIMENSIONS OF THE PROBLEM

Right from 1980s when terrorism in Punjab was at its worst till as recent as August 31, 1995 when the Chief Minister of Punjab, Sardar Beant Singh was assassinated in broad daylight in a well planned terrorist operation, the voice of the gun has echoed in various parts of the country including Jammu and Kashmir, the six sister states of North East, New Delhi, Punjab and even Mumbai. The alarming number of violent incidents in J and K alone, from 1990 to 1994, bring out the extent and scale of terrorist violence, (Table 1).[2]

Table 1 : Violent incidents in J and K (1990 - 1994)

Incident	1990	1991	1992	1993	1994	Total
No. of explosions	1522	677	757	1005	1168	5129
Incidents of cross firing	475	1126	1765	1628	1965	6859
Acts of arson	709	485	678	707	606	3185
No. of abductions	169	290	281	349	368	1457
Incidents of random firing	744	787	859	1026	1149	4565
No. of rocket firing	45	162	105	71	87	430
Civilians killed by militants	461	382	634	747	820	3044
No. of militants killed	550	844	819	1320	1596	5129
Attacks on security forces	732	1358	1934	2288	2675	8987
Security men killed	154	168	177	195	198	892
Security men injured	232	520	715	897	773	3137

In Punjab a look at the list of the prominent leaders assassinated from 1981 to 1995 (Table 2) or the 13 simultaneous bomb blasts in Mumbai on March 12, 1996 killing nearly 300 people and injuring 1000, demonstrates the reach of the terrorists, their access to and knowhow of lethal explosives and sophisticated timing and remote controlled devices.

Threat to Indian Society Posed by Man-Portable Weapons and Explosives

SQN LDR ANU RANA SALUJA, SC

"We are indeed, moving into a new era that holds great opportunities but also great dangers. We have not achieved a permanent peace even as the danger of global war recedes. The potential for smaller but still highly destructive conflicts between nations and within nations is growing. We simply do not and cannot know all the challenges that will arise in the future." This statement made by the former American President George Bush on the changing threat perception for the nation-state, after the collapse of the Soviet Union, sums up the emerging threats in this post Cold War unipolar world.[1]

The South Asian region has seen the new order taking root and taking shape towards a deeply troubled and conflict-prone world which is more complicated, more volatile and less predictable than in the past. In the last 10 to 15 years, limited conflict has sapped India's administrative and military machinery. It has taken the nation's precious efforts and resources which had to be diverted towards quelling of disturbances and maintenance of law and order. Pre-meditated, clinically planned and surgically executed killings and assassinations in cold-blood have indeed left an indelible mark on the fabric of the Indian society. Whether it is the pro-Khalistan secessionist forces in Punjab, the Bodo extremists in North East (NE), the revolutionary Peoples War Group in Andhra Pradesh or the sponsored anti national elements in Kashmir, they had unlimited access to weapons and explosives of varying degree of lethality and sophistication.

Edited text of the Essay which won the First Prize in Group B of the USI Gold Medal Competition 1996.

Squadron Leader A R Saluja is serving with a fighter combat squadron of the Indian Air Force. He has written a number of articles for the USI on defence matters.

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The interest of the USA in Central Asia is another factor affecting its future as USA wishes to have a role in the future developments of the region. The USA, Russia and China are in fact all interested in developments in the region and their interest covers the state of Jammu and Kashmir as a part of Central Asia. The contemporary example of Afghanistan is a warning to what dire results can follow such a big power interest. Already Tajikistan has become a cockpit of internecine war between Tajik of Afghanistan and of the State of Tajikistan adjoining Russia. India has a vital interest in the non-interference of these powers in Central Asia and in the peaceful development of the region.

Uzbekistan, Turkmenistan, Kazakhstan have signed trade agreements with India and it will be possible for India to help in their development provided the systems of communication are developed towards the sea, through Iran.

RELATIONS WITH AFRICAN COUNTRIES ON THE INDIAN OCEAN

India had long trading relations during the British rule with East Africa, South Africa, and Zanzibar. The traders from Saurashtra, Kutch and Gujarat had established branches in these countries for trade between India and Africa. The British imported plantation labour from India to work on the farms and estates. Indian labour was imported to work on the railways. These migrants stayed on in Africa after the period of their contracts. They set up small businesses in towns or villages and were called dukan-wallas (from dukan=shop) and rendered an essential service in retail trade. In the developing economy of these countries during the late 19th century and after, the Indian businessmen provided banking, shipping and other essential services in port cities like Cape Town, Nairobi and Dar-es-Salam, and were successful in competition with the white community. But the lot of these Indians, including the rich Indian traders was humiliating when the Dutch and English colonists developed a system of civil government. They devised discriminatory and suppressive regulations to keep the Indians segregated and to place obstacles in their way to keep them out of the mainstream in business, trade and agriculture. These regulations were in fact a beginning of the apartheid, later introduced formally. They were disallowed residence in the main residential localities in towns and their children were denied admission in the public school system. On a visit to South Africa in the late 80's of the last century, Mahatma Gandhi then a young and practising barrister - at - law, experienced these humiliations. He felt that he should help the Indians to fight this injustice and discrimination. He had faith in the sense of justice of the British Government and fought through petitions, 'prayers' and through newspaper publications. Later, he evolved the weapon of civil disobedience which he first experimented with, in the fight against discriminating laws and regulations in South Africa.

The East African countries Kenya, Tanginyika, and Uganda became independent in the 60s of this century. South Africa too has, at last, attained abolition of apartheid and white rule. Nelson Mandela became the President of the new republic and established cordial relations with India. In the other East African countries Indian commercial and business communies have continued to flourish although from time to time they have faced difficulties, as when Idi Amin became the ruler of Uganda and sequestrated the property and treasures of Indian traders. Large number of Indian businessmen had to leave Uganda but later regimes have reversed the trend. There is scope for expanding trading and commercial relations with these countries on a reciprocal basis. The countries of East Africa have lately formed themselves into an economic union and this is an instance of a general trend in the modern world.

Both East Africa and South Africa are India's neighbours across the Indian Ocean. It is natural that our economic relations should develop with them, especially when Indian traders have already developed business there and have participated in the economic development that is taking place. In South Africa, the members of the ethnic Indian community have a notable position in the country's political system and hold important posts in the cabinet.

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give pilots a strong foothold in a second career if found necessary. The Navy and the Air Force may wish to consider these proposals and refine them further to suit their individual requirements.

CONCLUSIONS

This article essentially deals with the problems of the officer cadre of the Army, which have assumed emergency proportions. A solution which can be made to work has been suggested. It is, by no means, comprehensive and may have to be refined further by discussion. Perhaps it may be considered as a 'Default Solution' since other methods have not produced the desired results and have become defunct. To make it work, it has to be examined with an open mind, without any inhibitions.

NOTES :

1. Kind courtsey Military Secretary's Branch, Army Headquarters.

2. Hira Committee Report (1980) and the paper 'Management of the Officer Cadre of the Army' written by the author in 1983 when he was the Commandant, Defence Services Staff College.

3. Based on the experience of the author as a technical instructor and as Vice Chancellor, Kurukshetra University, which had a Regional Engineering College associated with it.

Finally, no attempt should be made to take up the deficiencies in a hurry as otherwise a 'Bulge' like the one of the 1963-1967 era would result with severe disadvantages. Induction should be gradual and based on 'Flow Charts'.

Comparison with the Other Two Defence Services

The problems of the officer cadres of the Navy and the Air Force are not so alarming as those of the Army. However it is necessary to note them and apply or think of applying corrective measures before the problem gets out of hand as has been the case of the Army. As on 1 January 1997, the deficiencies in the officer cadre of the Navy were 5.68 percent; the deficiencies in the officer cadre of the Air Force were 7.47 percent. Officers in these two services are all of the PRC variety and most of them were commissioned through NDA, Karakvasla and their individual service academies. The exceptions to these are officers belonging to the Technical (Engineering) and Aministrative cadres which are filled by Direct Entry, Technical and Non Technical graduates. Any changes to the training pattern at NDA, Karakvasla will affect the Navy and the Air Force.

This proposal was first mooted at the Military College of Telecommunications, Mhow, during Jun/July 1996 at the Technical Advisory Committee meeting. Representatives of the Navy and the Air Force were also present at the address and the subsequent discussion. The representatives from the Navy welcomed the idea of NDA, Karakvasla producing Engineering Graduates for the Navy. The Air Force representatives, all of whom were from the Technical Branches, felt that it would not be necessary and in fact 'dangerous' to educate pilots to the level of Engineering Graduates. Unfortunately, they had no convincing answer to a query whether the days when pilots could be considered to be merely 'Sick and Throttle Jockies' were not long past and a good technical background and a sound knowledge of science and technology was essential to fly high performance aircraft of current and future generations. Perhaps an engineering degree like in the United States Air Force would be a sound investment in human resources and also

Some Aspects Affecting Preventive Diplomacy

Lt General (retd) D. Prem Chand, PVSM

Right of Intervention

Unilateral intervention by the Security Council in conflict areas on behalf of the UN is not authorised by the Charter. Each intervention mission will, accordingly need to be mandated by the Council. There is the sovereignty aspect to be carefully considered. There are quite a few conflict areas in the world today where the nations concerned would find themselves unable to accept UN intervention. The two *extraordinary situations* in which the UN has intervened have been the employment of US troops in proxy operations on behalf of the UN: Korea in 1950 and Iraq in 1990.

One way in which the conflicting aspects of intervention and sovereignty may be reconciled is through a mandate based on a majority consensus in the Council, with at least four of five permanent members and two thirds of the Council in favour of direct intervention. This would, in fact, amount to direct pressure of world opinion, in addition to any other measures, such as diplomatic and economic, by the member states to mandate and implement a proposed intervention. Of course, the Charter will need to be modified to codify some such stipulation. Yugoslavia is a recent case, where UN intervention at an early stage would have prevented the extensive damage to life and property. The same may have been possible in Iraq in 1990.

Other forms of intervention, as distinct from the involvement of a peacekeeping mission, could be more active diplomatic pressures, coordinated by the UN to diffuse potential conflict situations. Equally, the employment of the Secretary General's (SG) conciliatory and mediation missions at very early stages should be similarly helpful. But again at the instance of the Council consensus, and with the support and assistance of the powers with influence and leverage in the area.

If *Direct Intervention* is not considered advisable, we should aim at *Indirect Intervention,* coordinated by the UN.

Text of a paper presented by Lt General D. Prem Chand, former Force Commander Windhock, United Nations Transition Assistance Group in Namibia in a Seminar held in London on February, 21-23, 1992.

Journal of the United Service Institution of India, Vol CXXVII, No. 527, January-March, 1997.

Vulnerable Areas for potential Conflict

Developing countries are prone to internal conflict, as is amply evident in Latin America, Africa and Asia; particularly countries which are weighed down by heavy population. The main reasons are degrading poverty and marked disparities, between the Haves and Have Nots. This inevitably gives rise to frustrations, friction and conflict, especially amongst the millions of unemployed youth as fertile ground for terrorist activities.

The developing countries have been relying a great deal on Aid and Loans from World Organisations and friendly states to manage their economic problems. The time has come when many nations are finding themselves under a heavy debt burden. They have been unable to balance their budgets, in spite of heavy deficit financing and the loans are beginning to create their own grave problems. The reason is the absence of adequate accountability, with massive amounts continuing to flow towards the 10-20 percent affluent groups and the poor remaining where they were. There is a conspicuous absence of any effort at AUSTERITY and at balancing their budgets. They rely increasingly on borrowing as crutches, on which to lean. Mr. Salim Ahmed Salim, Secretary General of the Organisation of African Unity (OAU) at the time commenting on the major problems in Africa is reported to have said "Loans and borrowings have been the curse of Africa." The answer is for donor countries to satisfy themselves that a country wanting a loan has in fact made substantial cuts in its budget; and to add an auditing component to accompany the loan - a modicum of sovereignty has accordingly to be sacrificed.

Advance Warning and Forecasts for Contingency Planning

A mechanism needs to be considered at UN Headquarters to keep the Security Council and the Secretary-General advised of likely developments in vulnerable areas, and the probabilities of conflict, to enable contingency plans to be prepared well in time. The existing arrangements to collect and collate information have been unable to do much in the way of accurate and reliable forecasting. Apart from the Secretary-General's Secretariat, with its current affairs and information experts, Member States in the zones concerned should switch on warning lights, with advice and assistance to prevent a conflict arising in the first instance. More needs to be encouraged and done in this connection. The UN cannot, in principle, indulge in conventional "spy catcher" type of intelligence activities as such and have therefore, to rely on open sources of information. And yet, the permanent members of the Security Council, with their comprehensive intelligence networks can be most helpful in keeping the UN advised about likely developments of concern. There is, for instance, the view being increasingly expressed that an earlier assessment of

engineers (all arms and services) for a period of three months every alternate year to industrial establishments to keep in touch with their secondary professions of engineering, establish their credibility in the industrial world and possibly, pave the way for a second career, if the need were to arise. The same should be done for graduates in business administration to work in business houses.

(c) Built in 'Exit' facilities - after 15 years of service with a reasonably good gratuity; after 20 years of service with a pension proportionate to the length of service.

(d) Selection for a Master's Degree in Engineering, Technology or Business Administration should be based on a competitive basis with a service liability of 10 years after completion of the course.

Continuity in a career from joining to retirement is an attraction towards a job in any walk of life. Unfortunately the cadre structure of Defence Services officers is such that this cannot be provided to more than 30 to 35 percent of the entrants, ie, the PRC officers. A large proportion of the balance have to be SSRC officers. SSRC, as originally conceived, is no longer operative. The only possibility of reviving it appears to be in inviting 10 plus 2 qualified youth to join the Army and serve for 10 years as an officer in exchange for quality education in Engineering or Business Administration. Their recruitment, training, employment and all other aspects will be the same as described for NDA, Karakvasla entrants. This means that 'The OTA, Madras', would have to be re-organised to become a combination of NDA, Karakvasla and IMA, Dehra Dun. Other alternatives are also possible.

There is a strong case for reducing the size of the officer cadre. Civilianisation of static establishments and units should be considered keeping military personnel at all ranks to the barest minimum to meet the requirements of compassionate cases and low medical category personnel. The civilian personnel in these establishments should be members of the Territorial Army to ensure rapid mobilisation in an emergency.

and mid semester breaks of ne week each would be catered for. This would provide a total availability of 161 weeks during the course. Of these, four weeks would have to be added to the break between the sixth and seventh semester to provide for an attachment to an industrial establishment for practical experience, leaving 157 weeks for the syllabus including examination time. What is covered in 160 weeks by a civilian institution could easily be covered by a military institution in 157 weeks.[3] What makes you feel that this change would attract better quality youth in larger numbers? The very best youth very seldom have opted for defence service careers nor will they now come in unless family financial circumstances necessitate this, since education in engineering and technology is very expensive. But below these 'Toppers' there are a large number of above average standard youth who are denied entry into engineering colleges because of the reservation policy of the Government and also the high cost of technical education, as mentioned earlier, which shuts out good youth from middle class families.

As for the technical corps, they would be receiving qualified engineers at the scale of 100 percent of their requirements (hopefully, after a period of time). These officers would be available in units all the time since the need to drain out three years worth of young officers to do degree engineering courses would no longer exist. It is likely that these corps would resist these proposals, whatever their merit, since the 'Empires' that have come into existence as the Military College of Engineering, Kirkee, the Military college of Telecommunication Engineering, Mhow and the Military College of Electrical and Mechanical Engineering, Secunderabad would have to be dismantled.

Some other refinements to the proposal are :-

(a) Cadets joining the NDA, Karakvasla should be given a stipend at the rate of half the stipend paid to cadets at the IMA, Dehra Dun. Stipends at both these institutions should be paid during their entire stay there.

(b) Arrangements should be made for the attachment of

the Gulf situation could well have assisted in preventing the eventual tragic developments. Yugoslavia in 1991 has been yet another tragic example. Such assessments need to be periodically highlighted and reviewed by those concerned at the UN and by the Member Nations. The Military Staffs Committee, not utilised for years, stepped up with intelligence experts, would be particularly suitable for this purpose, as a Joint Intelligence Committee.

The above would also assist towards contingency planning, being based on such assessments. Arrangements to have peacekeeping contingents trained and standing by, at short notice, could be tried out on a zonal basis, with battalions from three to five designated countries in each continent to be ready to form brigade groups, and later divisions if necessary, to fit in with these plans, on a provisional basis as "UN Reserves for Global Peace Keeping and Disaster Relief". Movement plans, airlift and logistics would go hand in hand by the same or other designated countries, within the zones, to provide such facilities. Periodic training exercises and seminars would keep them well integrated. These formations, carrying out their normal defence duties, but with special emphasis on peacekeeping concepts and techniques would be maintained by the countries concerned; enabling the UN to call up well tuned and trained forces at short notice, without the prohibitive cost of maintaining them by the UN. In Europe, such arrangements would obviously be advisable and effective in the earliest implementation of "settlement plans" in situations such as in Yugoslavia in 1991. The same units and formations would in addition be invaluable in tackling natural or man-made disasters at very short notice.

Direction and Control

Although the zonal peacekeeping formations envisaged above would be under the command of their own commanders, the overall direction and control would be exercised by UN Headquarters, as has been the case so far, when the formations are called up for UN peacekeeping duties. The existing UN command and control procedures have been time tested and have worked well. To make them more effective, there is however, the need to enhance the working powers of the Secretary General, once a mission is established in the field. To avoid misunderstandings and confusion, it must be clearly understood that operational aspects must be kept distinctly separate from political or diplomatic issues which may affect the interests of the countries involved, from time to time. To arrive at a proper and workable arrangement between one government and its forces in the field is difficult enough; this would be all the more so where a number of governments and their varying interests are involved. This is an important aspect which needs to be adequately highlighted at peacekeeping study groups and seminars. The SG and the UN Secretariat should also

not be handicapped by inadequate funding for peacekeeping missions. Th unfortunate state of affairs needs to be set right at high priority.

Employment of Minimum Force

In home countries, the use of force by their own security forces, in a of civil power, has led'to grave consequences, as is well known. Every effo should, therefore, be made to ensure that UN troops, from contributing cou tries are never placed in situations where they are obliged to open fire o troops or civilians of a country which has requested UN assistance, except course, when they have to return fire in self defence. This cardinal factor nee the utmost consideration by the civilian and military components of a missio Detailed studies and discussions on this aspect at peacekeeping seminars an exercises should be of good value. For a peacekeeping force, to use force i a contradiction in terms.

Incidence of Conflict within Countries

Though conflict situations between countries have decreased consider ably, yet the incidence of conflict within countries is on the increase, especial ly in developing countries, largely owing to population pressures, economi disparities and the increase in global terrorism. It is for consideration whethe the well tried concepts and considerations applicable to international peace keeping should not be tried out to defuse conflict situations within the cou tries, the aim being to prevent such situations and incidents arising in the firs place. I am convinced that this approach would be most helpful in many way and states having internal conflict need to be encouraged to utilise officer with peacekeeping experience to develop and try out these concepts and tech niques.

Human Rights

The developed democratic countries have all along, most admirably, stood for the rights of oppressed classes — for their freedom of speech and movement — for speedy justice to those under detention and trial, and the tracing of mission persons unheard of for years. But there are even worse forms of oppression in certain countries, where millions are deprived of even their fundamental minimum needs of adequate food, shelter, clothing and security. These human rights need to be increasingly highlighted in human rights reports by international agencies, as it was pressures of this. kind which led to massive movements against the state in Russia in 1918, and in France even earlier. This sad and deplorable state of affairs is also largely a cause of friction, violence, and conflict. More needs to be said and done at international

The measures necessary to ensure qualitative and quantitative improvement of this intake is based on the hypothesis that no young man wishing to enter a good profession in the current environment opts for a BSc or BA degree unless his ability and performance in the 10 plus 2 examination have not been good enough to enter the engineering or medical profession. Some young men of high merit do, of course, join these degree courses with a view to join the All India Services, the legal profession or get into the business management sphere after obtaining the necessary Master's degree. Therefore, keeping in mind the rapid development of technology by leaps and bounds and the impact of these developments in the military sphere, should the education of NDA entrants continue to be oriented towards the attainment of a BSc or BA degree? The time has come to change the curriculum to educate these entrants to acquire a BE or BTech degree in a discipline relevant to his (or her) future employment. To cater to the requirements of 10 plus 2 entrants with arts and humanities backgrounds, a Bachelor degree in Business Administration could also be introduced. The pattern of education which has been in vogye at West Point, the Naval Academy at Annapolis and the Air Force Training College at Colorado Springs, all in the United States of America are worth introduction at NDA, Karakvasla. To answer a few queries that have been raised when discussing this proposal, does it harm a young man destined for service in a non-technical arm or service if he acquires a degree in engineering or technology? A person can only assess whether any knowledge that he has acquired during his life time only when he is on his death bed. A high level of knowledge in technology would help an officer to understand and handle sophisticated weapons and equipment better. It also gives him the foundation for a second career, if every necessary. Would it be possible to educate a person to this level in three years, whereas engineering colleges and institutes of technology take four years? Training courses conducted in military institutions are better organised and better managed than those conducted in civilian institutions. Civilian institutions work for 40 weeks in a year giving a total availability of 160 weeks for the course. NDA training could be increased to three and a half years with 46 weeks per year; a break of four weeks would be provided between two semesters

Summing up this rather dismal part of this article, the highlights are :-

(a) A sensible and equitable scale of emoluments for the Defence Services have not been evolved by five successive pay commissions over half a century. Informed and dynamic political leadership to over-ride bureaucratic obstruction to give the Defence Services their due does not exist.

(b) Measures to improve the image of the Defence Services in general, and the Army in particular, are not likely to emerge in a hurry because of deeply entrenched vested interests.

(c) 'Patriotism' 'Glamour' and 'Glory' are no longer operative factors.

(d) Political Management may improve mitigating the rigours of service conditions.

(e) Promotion prospects may improve gradually with better cadre management.

With all these handicaps, is there any other means left to attract youth of reasonable quality to join the officer cadre of the Army?

METHOD TO OVERCOME THE PROBLEM

It is hoped that it has been reasonably well established in the foregoing parts of this article that of the three streams of intake into the PRC officer cadre of the Army, the only one that has been and continues to be effective is the 10 plus 2 entry through NDA, Karakvasla, followed by one year at the IMA, Dehra Dun, not withstanding the recent reports that the quality of this intake has also deteriorated over the last few years and the latest trend is inadequacy of volunteers of an acceptable standard. The first suggestion to improve matters is to drop the Technical and Non Technical graduate intake streams and have only the 10 plus 2 type of entrants. Perhaps this is radical, but is justifiable.[23]

forums to further the cause of Preventive Diplomacy. Again, a measure of sovereignty will need to be sacrificed by the countries concerned to allow for International Human Rights Agencies to examine and report on such issues. As, in some developing countries, the percentage of those below the poverty line, and those almost so, is more than 50 percent, it would amount to a matter of "Majority Rights".

CEASE FIRE ASPECTS

Events in Yugoslavia have once again highlighted the fact that the mere declaration of a cease fire by both sides is not enough. A cease fire has to be implemented — done best and effectively by third party intervention. Even then, it can easily be broken by irresponsible elements or ill disciplined troops, as has happened so very often. A great deal of close liaison, supervision and vigilance is, therefore, necessary, to ensure that the rules accepted by both sides are meticulously recorded by the third party and any violations need to be immediately pointed out and set right. Further, there must be no forward movement of troops; nor any outflanking moves permitted. In fact the operative direction should be better phrased as "Cease Fire and Stand Fast", or *"Cease Fire and Cease Movement"*. A move forward by one of the parties would inevitably draw Fire, and the Cease Fire becomes meaningless. This has been the main problem in Yugoslavia.

SALE AND SMUGGLING OF SMALL ARMS

There have been encouraging reductions in nuclear and conventional armouries of the world. But the proliferation of small arms is ever on the increase. Terrorists and militant organisations have no problems in obtaining these openly, and through smuggling. In Namibia, every individual could buy upto ten sporting weapons, including rifles. So is the case in many countries. Teenagers are now going around terrorising people with these, which they treat as the latest toys. Some form of checks, balances and accountability need to be considered to neutralise these trends; perhaps, sales only through government agencies, and not through the open market. More stringent customs regulations are needed as being tried out with regard to drugs and narcotic smuggling, as well as precious metals and stones. Some sort of a convention may need to be devised, to prevent the increasing use of such weapons in conflict situations.

Letters to the Editor

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

I

Dear Sir,

The text of Field Marshal Cariappa Memorial Lecture 1996, delivered by Lt Gen (Retd) SK Sinha, PVSM, (USI Journal Oct-Dec 96) was quite interesting and thought provoking, even though some of its portions were a repetition of his autobiography, 'A Soldier Recalls'.

Gen Sinha has rightly pointed out that 'apart from efforts to win the hearts and minds of the people' during counter insurgency operations, there is an urgent need for effective public relations (PR) to combat hostile propoganda and project correct image of our Army. However, precious little has been done so far to pep up our PR and this important facet of psychological operations remains a low priority area for our policy makers, or so it seems. Otherwise, why is it that most Army PROs are neither adequately qualified nor motivated enough to carry out their assigned job in a professional manner. One has come across quite a few of them who have apparently been given the job post supersession to enjoy a home posting. There is no dearth of talent in our Armed Forces: It is our attitude towards such appointments that must change.

5 Sikh LI
C/o 56 APO

Yours Sincerely
(Maj Sunil S Parihar)

made to prestige, the Defence Services do not mean that a man in uniform should be put on a pedestal and worshipped at all times, something which cannot and should not happen in a democracy. All that the Defence Services ask for is that officers of the public services and public utilities extend some courtesy when they go to see them or write to them. Another visible aspect which particularly affects the Army is having the same badges of rank as the police and para-military forces and officers with vast disparities in the period of service rendered wear the same badges of rank. These are aspects which have been requiring correction for nearly 50 years but the political leadership is not interested in doing anything positive.

Thus, the Defence Services have no control over the emoluments aspects. They have very little say in service conditions which generally are influenced by poor political and administrative management. However, the Defence Services, do have control over promotions. Unfortunately over a period of time the Army has so mismanaged its officer cadre that officers are assuming command of units at the ages of 45 to 47, whereas they should be doing so when they are about 8 to 10 years younger. Since promotions to higher level require a minimum specified service at the immediate lower rank, all promotions above the rank of colonel are delayed. This has two adverse effects; firstly, officers promoted to these levels are past their prime for assignments in these ranks; secondly, some who deserved to make it to the next rank have to superannuate because the delay in promotion has brought them to the retirement age before promotion. Therefore, the Army cannot absolve itself totally from the responsibility for making its officer cadre unattractive to potential entrants.

It is very doubtful whether in present day India, 'patriotism' and 'Glamour and Glory of the Service' play any great part in attracting good quality youth or even mediocre youth to join the officer cadre of the Army. Although outside the scope of this article, it is worthwhile mentioning and pondering over whether the current political leadership would be able to enthuse youth to join the Defence Services even in an emergency situation like the one which emerged after the disastrous 1962 conflict.

uate entrants into the technical corps are also eligible for selection for M Tech courses.

Conceptually, the existing policies and systems cannot be faulted and yet the Army has been unable to attract persons of quality in sufficient numbers to meet the minimum requirements. The possible reasons for this will next be examined.

Possible Reasons For Deficiencies

Pay, promotions, prestige and service conditions are important features that make a service attractive. In spite of the best efforts of the Chiefs of Staff of the three Defence Services and their respective headquarters over a period of nearly 50 years, neither pay commissions nor the Government have paid much attention to what the Defence Services have said and are continuing to say about the need to attract reasonably good talent into their officer cadres in the overall interest of National Security. No attempt has been made by these agencies to provide the officers of the Defence Services the same pay for the same length of service in comparison with the Indian Administrative or any other Service, as a basic necessity in pay structuring. Adequate compensation is not provided for hard living conditions, frequent movement all over India, living away from families and risk to life and limb not only during wars which are infrequent but also during counter insurgency operations which are endemic. Most armies of the world build this element into the emolument structure or provide it as Military Service Pay or 'X Factor Compensation'. It is generally observed that Chairmen and non-bureaucrat members of pay commissions are sympathetic to the Defence Services when they visit and see the conditions in units serving in frontier and other field areas. However, they seem to forget these observations when making recommendations to the Government, perhaps under the overwhelming influence of members who are either serving or former bureaucrats. A vast majority of political leaders have no idea of the Defence Services, except perhaps the fact that they take part in Republic Day Parades. Hence, it has been a case of 'Remembering God and the Defence Services only when facing trouble'. When a reference is

Review Article 1

The End of a Superpower

Brig (Retd) Chandra B Khanduri

Gorbachev - A Man in a Hurry

When a Goliath is to be killed, a David is to be found, is an old saying. That happened in case of a mighty Superpower, USSR. Mikhail Gorbachev proved a Soviet David.

From the days of Chernenko in 1984, the Soviet watchers were conditioned to a Russian word-Glasnost. And as, Gorbachev became the General Secretary a book of the very theme, Glasnost, hit the western markets. Along with this word, came another word, Perestroika. For, 'openness' and 'restructuring' as these words meant literally, set the ball rolling from 1988 for a devasting change in the Soviet Union.

When Gorbachev came to Delhi in November 1986 to sign the 'Delhi Declaration', the Rajiv Gandhi Government was in the midst of a dilemma created by the Chinese intrusion in Arunachal Pradesh. Surprisingly Gorbachev cautioned the Indian Prime Minister to exercise restraint and develop rapprochement. He was heard and his advice heeded.

Gorbachev had by this time an image of a deft statesman committed to pursuing international peace. He had agreed to unilateral withdrawal of the Soviet strategic reserves deployed on the Usuri against China, and he began reducing forces from Mongolia, Vietnam, Cuba, Angola and Ethiopia. He offered to evacuate the Soviet troops from the Warsaw Pact countries. With Gorbachev in seat, the Cold War thawed. Ronald Reagan, earlier having openly cursed the Soviet leadership as 'agents of an evil empire' had to admit that 'Gorbachev was easy to do business with.'

Two Faces of a Coin - The Soviet Roulette

In the external affairs, Gorbachev achieved more monumental breakthrough. The end of the Cold War Treaty and the unification of the two Germanys became possible because he agreed. So were the reduction in arms; the Intermediate Range Nuclear Force (INF) Treaty; preventing the arms race on Strategic Defence Initiative (SDI) and a unilateral withdrawal of the Soviet

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Gorbachev and After. By Stephen White, Cambridge, Cambridge Univ. 1991. p. 310. Rs. 345/-. ISBN 0-521-42435-6.

Brig (Retd) B C Khanduri is former Director of Psychological Operations MOD. He has authored a number of books concerning national security.

forces from Afghanistan. He doled away, in several ways, the Soviet leverages as a Superpower, without obtaining a guarantee of reciprocation.

By 1988, the internal problems began manifesting itself in ugly and serious dimensions. Glasnost saw a regimented and otherwise disciplined Soviet citizenry steam out its grievances against the leadership. So violent were the outpourings that the Western media and governments converted dissension into subversion. Some of the intelligence agencies like the CIA managed to infiltrate into the confidential vaults of the state secrets. KGB and the Armed Forces became their targets. Fears were exacerbated for the Army that flooded barracks from service abroad, e.g. Afghanistan and land borders with other countries, on the rumours of demobilisation without guarantee of employment. Rumours were also rife that ordnance factories were being converted for civilian use. Exploitation took place for encouraging secession through the ludicrously loose constitution that permitted republics to have foreign missions and secede, if others became unaccomodating. In direct consequence to it, the Baltic republics of Lithuania, Latvia and Estonia gave a clarion call for secession. The Central Asian Muslim republics began to receive support from the Muslim neighbours like Turkey and Pakistan. They raised their hydra heads too.

Gorbachev acquiesced to the US demands on the UN for use of force against Iraq in Operation Desert Storm. By this he acquired an image of an American lankey and belied the trust of the Third World. As a direct consequence of strategic dimension, the US has become the only superpower of the world. Gorbachev's diplomacy became hereafter what Stephen White calls in his book, "Gorbachev and After", a 'diplomacy of decline'.

Two more developments further shook Gorbachev's infirm roots: One, the rise of a 'Frankenstein' of an opponent in Boris Yeltsin, in Gorbachev's native Russia. He was later to use the Kautilyan strategy of *Sam, dam, dand and bhed* (conciliation, reward, fear of punishment and dissension). He orchestrated an opposition against Gorbachev and subsequently retrieved him from the members of the hard liners, who staged a coup against him in 1991. Two, the Chernobyl nuclear leak, communal tension, open fights in Nagorno-Karabakh, Georgia and Uzbekistan led to serious internal disorders. Full exploitation of these were made by the Western propaganda to create scenes of doom and gloom - and darker days - among the people. Truth became a casualty; so also Mikhail Gorbachev and his experiments of Glasnost and Perestroika.

The cumulative result of all these was summed up by Dr Fidel Castro of Cuba who told the 'Guardian' : "Our revolution might not be able to resist if there is a breakdown in the Socialist Community -- (But) a catastrophe has happened in the Soviet Union - the mother land." The mother land is now a

going into the technical corps of the Army. In the late forties when major policy decisions were taken on these matters, it was recognised that every officer joining these three corps should be trained to the level of graduates in the branch or branches of Engineering relevant to these three corps. The period of this training was and continues to be three years. These courses commence every year for a batch which was commissioned three or four years or so earlier. The institutions conducting these courses have three courses running concurrently. Units, therefore, do not have three years worth of young officers available to them at any one time. The shortage of young officers used to be felt even when the overall strength of officers in units was at about 90 to 100 percent of authorisations. The officer problems of these units, at present, which are already short of about 30 percent of officers in the ranks of captain and subaltern, because of this additional commitment, hardly needs any elaboration.

In the late sixties, with the advancements in the technology of military equipment, the technical corps felt the need for a few selected officers qualified above the level of graduate engineers to meet the requirement of good, high grade instructors in their training establishments, for writing practicable Qualitative Requirements (QRs) for new and futuristic equipment to be designed and manufactured in the country, producing exhaustive Questionnaires for Technical Trials and Evaluation and User Trials and such like assignments where a high level of technical competence would be required. A few officers from these corps, based on their aptitude, capability and performance are sent for obtaining Master's Degrees in Technology (M Tech) in specialisations relevant to the requirements of their respective corps, to Indian Institutes of Technology or to universities and other technical institutions abroad.

The Technical and Non Technical graduate streams enter IMA, Dehra Dun, directly and undergo pre-commission training for a period of one and a half years. They also get the same stipend as NDA entrants during the last six months of this training. Non technical graduates joining the technical corps, if any, are also eligible for going on engineering degree courses. Technical grad-

required number of volunteers of acceptable standards are not forthcoming.

Volunteers for SSRC have followed the pattern as mentioned about the Non Technical stream of intake into the PRC cadre. Over the past few years this has almost completely dried up and the Officers Training Academy (OTA), Madras, where the SSRC intake is trained, is virtually in a state of suspended animation.

Initial or Induction Training Pattern

The existing system of training is next considered. This system was evolved in the late forties and is still in vogue after a period of nearly 50 years. Intakes into NDA, Karakvasla, undergo training for a period of three years, the content being mostly education to bring them upto the level of a graduate in basic physical sciences (BSc) or of a graduate in arts and humanities (BA). After going through the necessary examinations, they are awarded these degrees by Jawaharlal Nehru University, New Delhi. Cadets are not paid any stipend during this training. This education - cum - military training is followed by pre-commission military training of duration one year at the Indian Military Academy (IMA), Dehra Dun, in the case of the Army, the pre-commission Naval establishment for differing durations in the case of the Navy and the Air Force Academy near Hyderabad in the case of the Air Force. The theoretical part of this pre-commission training in the case of both the Navy and the Air Force is more technology and science oriented, since it includes the principles and operation of high technology modern weapons and weapon platforms. During this period of pre-commission training, cadets of all the three Defence Services are paid a stipend which has varied in value from time to time based on the recommendations of pay commissions. At present the stipend is Rs. 2,300/- only, paid during the last six months of this training.

Although not part of pre-commission training, it is considered necessary to mention the post-commission training of officers

fragmented crown, each of its jewel separated. And perhaps irreparable.

'Irretrievable' has also become the world order that the superpower Soviet Union had helped maintain. The two superpowers had maintained order, discipline and balance.

The US having become the sole superpower is now doing - and would continue to do what pleases her.

A New Hope

Having said the above against the Gorbachev holocaust for the Soviet Union and the Third World, one pauses for a rethink : can Soviet Union be resurrected in the form of a 'renewed federation' of Gorbachev's dream, each politically independent but combining to share their common economic gains and military might? The 70 years of socialistic way of life and governance could still serve as a jump pad for future ventures.

NOTE TO CONTRIBUTORS

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

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

Review Article 2

Constitutional Development in Bangladesh*

LT GENERAL (RETD) S L MENEZES, PVSM, SC**

This book on constitutional development in Bangladesh narrates how the establishment of a constitutional government had been thwarted over the years, inspite of the ideal prescriptions in the original 1972 Constitution. As this book was written in 1992, it inevitably predates both the latest elections in which the Awami League returned to power, as well as the penultimate February 1996 elections which the Awami league boycotted, unless held under a caretaker administration. However, the author, Dr. Dilara Choudhury, does provide many illuminating insights into the pre-1992 political turbulence and dilemmas of Bangladesh. As is known, Bangladesh came into being with the ideals of democracy and freedom. During the Pakistan period (1947-1971), with a span (1958-62) of naked military dictatorship, the author iterates the country was ruled by a West Pakistani coterie. The people of the country made unprecedented sacrifices during the liberation war, of a severity experienced by few countries. The author asks what has been the result of their sacrifices, and what went wrong with Bangladesh? The revolutionary war had its own pitfalls. In the author's opinion, it undoubtedly weakened the esteem for authority; it also dramatically radicalised Bangladesh's society, which went into a state of flux. Post-liberation Bangladesh was also confronted with the situation of a country beset by socio-economic problems and lacking institutionalised authority. Even though he lacked organisational experience, Sheikh Mujib's charisma and personal popularity worked like magic, but, the author postulates, 'Unfortunately Sheikh Mujib, instead of institutionalising his charisma, started a process of personalization, such a notion is bound to have negative impacts on the values of constitutionalism'.

The author recounts that Mujib's personal style of politics and his overwhelming majority had created an executive without any checks, whether by the legislature or the judiciary. Mujib then moved to establish a one-party system through the passage of the Fourth Amendment. The author urges an

*Constitutional Development in Bangladesh : Stresses and Strains. By Dilara Choudhury, Karachi, Oxford Univ Press, 1994, p. 240, Rs. 345/-, ISBN 0 19 577507 4.

**Lt Gen (Retd) S L Menezes is a former Vice-Chief of the Indian Army and the author of the well known book on the Indian Army, Fidelity and Honour : The Indian Army from the Seventeenth to the 21st Century (New Delhi : Viking, 1993).

Journal of the United Service Institution of India, Vol CXXVII, No. 527, January-March, 1997.

(b) The Army expanded from this figure of about 200,000 to 850,000 during the years 1963 to 1967. The patriotic fervour which the then political leadership was able to invoke after the 1962 debacle provided adequate motivation for young men of good quality to come forward to fill the officer cadre which had expanded from about 9000 to 37,500 as 'Emergency Commission (EC)' officers with a liability to serve for the duration of the Emergency. Because the enlarged requirements had to be met in a short time, the selection standards had to be reduced and many mediocrities were also recruited. The release of EC officers commenced about 1972 or so and unfortunately, the best of them left the Army and joined the All India Services and the Army was left with a large number of mediocrities. Many of them even obtained PRCs but spent long periods of their service as superseded Majors or Lieutenant Colonels. This came to be called the 1963 - 1967 'Bulge'. These officers remained in service till the early to mid nineties.

(c) The performance of the Army during the 1971 conflict could be attributed partly to the youthful profile of 'Junior Leaders' that were then available (on an average about 24 to 25 years of age) and partly to the fact that most of the high quality EC officers had not been released.

(d) After 1972, the growth of the Army has been gradual and recruitment into the officer cadre has not posed any problems till about the mid eighties, although the decline in the quality of volunteers was quite discernible.

The trend since mid eighties resulting in the apalling shortages as on 1 January 1997 has been :-

(a) Severe decline in the numbers of even volunteers of inadequate quality into the Technical graduate and Non Technical graduate streams of the PRC cadre.

(b) Initially, a gradual decline in the quality of 10 plus 2 entrants into the NDA. It has been recently reported that

Although this policy which was adopted soon after independence cannot be faulted, it had some drawbacks which became more and more evident with the passage of time. Except during the early years after independence, the technical graduate stream has not attracted persons of quality both as regards technical competence and possessing adequate 'Officer Like Qualities (OLQ)' or leadership attributes, bar a few exceptions who have and continue to reach the higher echelons of the officer cadres of the technical corps. Basically the causes for the deterioration in the standard of the intake into the Army were the expansion in job opportunities as industrialisation (both public and private sectors) progressed, the 'Brain Drain' which took away the best technical graduates to Western Countries, particularly the United States of America, and the unattractive conditions of service, viz, hard living conditions, slow promotions and low emoluments compared to people in the same age and service groups in technical appointments in other walks of life.

The Direct Entry, Non Technical type of entry, by and large, bar a few exceptions, has never been of a good standard. Over a period of time the intake consisted of people who could not make the grade elsewhere and joined the Army as a last resort.

The matriculate, now 10 plus 2, type of intake into the NDA has been of a uniformly high standard, bar a few exceptions. The higher echelons of leadership of the Army, from about the late seventies, has been provided by this intake and, without exaggeration it could be said that NDA, Karakvasla, has over the past 20 to 25 years provided the 'Hard Core' of the officer cadre of the Army. In all probability, this statement is true of the other two Defence Services also.

The foregoing summaries have to be edited by the following observations :-

(a) Till 1962, the strength of the Army was a little over 200,000 with an officer cadre of about 9,000. The annual intake was much smaller than now and, generally, as compared with today, young men of better quality were recruited.

army 'putsch' was possible in 1975 because Sheikh Mujib had alienated key societal groups due to economic mismanagement, serious law and order problems, and the erosion of civil institutions. This was followed by coups and counter-coups, leading to a period of chaos and confusion, if not total anarchy, followed by periods of martial law. The first martial law administrator, the late President Ziaur - Rehman, gave the country a new political order: Zia's political system was not a true presidential or parliamentary one, as the Bangladeshi Parliament lost many of its powers, most notably the power over financial matters, and the judiciary also suffered some setbacks. Though Zia revived the multi-party system in the country, his quest for power prompted him to encourage factionalism, within the existing political parties, with splinter groups being co-opted by Zia's ruling party, the Bangladesh Nationalist Party. This action of Zia retarded the growth of healthy political parties in Bangladesh.

Zia was followed by a weak and ineffectual civilian government for a very short period. This civilian (Sattar) government was however overthrown by another military ruler, H.M. Ershad, in March 1982. Then followed another period of martial law, succeeded by a limited or controlled democracy. After nine years of authoritarian rule, Ershad was removed by a popular uprising in November/December 1990, in which people of all sections of society participated, and some elements of the armed forces also gave support to the people's movement. Ershad's nine year rule further stunted the growth of constitutionalism in Bangladesh. The extension of time for the 30 women's reserved seats for another 10 years by Ershad is cited as a case in point. An important constitutional issue which dealt with 49 per cent of the electorate was not decided by the people's representatives, but through a discussion between the First Lady, Roushan Ershad, and two factions of the Jatiya Party. Begum Ershad, who had no *locus standi* in constitutional matters, had been in favour of 60 reserved seats for women instead of 30, whereas one faction had been in favour of abolition, and the other advocated the status quo. Ultimately 30 reserved seats for women were retained for an extended period of 10 years. Such was the nature of the constitutional politics in Bangladesh during the Ershad period. After the fall of Ershad, the author states, the country had its first free and fair elections in February 1991, under a caretaker government, installing the regime of Begum Zia.

The author concludes that the regimes of Mujib (1972-75), Zia (1975-81) and Ershad (1982-1990) maintained only the facade of constitutionalism, unlike in India, where proper constitutionalism has, by and large, prevailed. As to the Bangladesh Nationalist Party, the author opines that behind the scenes criticism of Begum Khalida Zia, the present president of the party (and till recently the Prime Minister) as to her alleged authoritarianism towards her party members, demonstrates the lack of democracy within that party. As to

the Bangladesh military establishment, the author emphasizes that it is different from both the Pakistan and Indian Armies: 'the Pakistan Army is political but cohesive, whereas the Indian Army is apolitical in the true sense of the term....the (Bangladesh) Army personnel, who deserted the Pakistan Army in the wake of the liberation war, did so on their own initiative and were thus drawn directly to fight for a political cause.....' And what is the political scenario today, by circumstance outside the ambit of this 1994 publication? The Awami League, the party founded by Sheikh Mujib, has come to power for the first time after the 1975 coup. The present Bangladesh Prime Minister, Sheikh Hasina, has made it clear her government is determined to bring her father's assassins to book. Sheikh Mujib's killers had so far gone scot free. At one time they were treated as heroes by some sections in Bangladesh. Sheikh Hasina's government has arrested six of the 24 persons involved in the killing of her father. Four have passed away. Most of the other 14 accused are abroad. During the military regimes, they were given diplomatic postings. They remained in their posts even during Begum Zia's regime who refused to withdraw the amnesty given to all former coup leaders. The Indemnity Act of 1975 has been withdrawn, and extradition treaties are being negotiated with 12 countries for these 14. Following Sheikh Mujib's assassination, Awami League supporters were hunted all over the country. Much of his cabinet was wiped out with him. While the rehabilitation of Sheikh Mujib will go ahead without any opposition from any section, the Prime Minister will come under increasing pressure to act against those who worked against her father's party. On the occasion of her father's death anniversary on 15 August 1996, Sheikh Hasina said, "There must be a trial of the killers, but we need the opposition's cooperation to do so". She will, however, make sure that the Bangladesh Army as a whole is not castigated. Sheikh Hasina knows that she cannot afford to antagonise the armed forces in a nation which has had three coups and 18 attempted coups since Independence in 1971. Sympathy for the killers, however, even if the arrested former officers are tried, will not be widespread.

(d) Method to overcome the problem.

(e) A brief comparison with the other two Defence Services.

INTAKE OR RECRUITMENT STREAMS INTO THE ARMY

The intake streams for Permanent Regular Commissioned (PRC) officers fall under three classifications :-

(a) Boys with 10 plus 2 qualification for admission to the National Defence Academy (NDA), Karakvasla. Boys selected for the officer cadres of all the three Defence Services are admitted to this Institution and are trained together.

(b) Technical graduates for the three 'Technical Corps', ie, Corps of Engineers, Corps of Signals and the Corps of Electrical and Mechanical Engineers.

(c) Direct Entry, Non Technical graduates for all arms and Services.

No officer cadre can afford to fill its entire requirements by recruiting PRC officers, since this would lead to a large percentage of these being superseded at the ranks of Major, Lieutenant Colonel and Colonel (in all, about 70 percent). Supersession leads to demotivation and no army can carry such a large percentage of demotivated officers. After due analysis, it was established in 1980 that PRC officers should form only about 30 to 35 percent of the cadre strength and the balance should come from 'Supporting Cadres' like the 'Regimental Commission', 'Special List Commission' and 'Short Service Regular Commission (SSRC)[2]. Since Regimental Commission and Special List Commission cadres have their limitations, the bulk of the supporting cadre has to come from the SSRC category. Recruitment into the SSRC category is made from Non Technical graduates who are taken for an initial period of engagement of five years extendable in selected cases to 10 years. As an incentive to attract suitable persons in adequate numbers, about 30 to 50 per cent of them are selected for the grant of PRC after the completion of five years of commissioned service.

Problems of The Officer Cadre of The Army

LT GEN K BALARAM, PVSM, (RETD)

INTRODUCTION

Over the past few years it has been known that sufficient number of young persons, men and women, are not volunteering to join the officer cadre of the Army. On 1 January 1997, the deficiencies of officers in the officer cadres of the different 'Arms' and 'Services' of the Army were Armoured Corps 30.4 percent, Infantry 26.03 percent, Mechanised Infantry 25.3 percent, Field Artillery 32.5 percent, Air Defence Artillery 27.7 percent, Corps of Engineers 31.5 percent, Corps of Signals 29.6 percent, Army Service Corps 34.4 percent, Army Ordnance Corps 27.9 percent, Corps of Electrical and Mechanical Engineers 32.9 percent, Minor Corps 20.3 percent, Special List Cadre 36.8 per cent, Total 29.7 percent. Deficiencies in any hierarchical structure will not exist for long at the higher levels of the hierarchy since the vacancies at higher ranks will be filled up by promotions. The deficiencies show up at the ranks of Captain or subaltern in units. Such high percentages of deficiencies, in effect mean that 'Junior Leadership' is virtually non existent in units. In blunt terms, the 'Fitness for War' of most units is very questionable.

The aim of this article is to analyse the reasons for this state of affairs and suggest some measures which could improve the recruitment into the officer cadre. The article is broadly divided into the following parts :-

(a) The streams of intake into the officer cadre of the Army.

(b) Induction or initial training.

(c) Possible reasons for deficiencies.

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Review Article 3

The Kashmir Question*

MAJ GEN (RETD) DIPANKAR BANERJEE, AVSM *

Two elections in Kashmir during 1996 usher hopes of a new beginning in this long suffering state. The time to take stock is now. For this brief period is but a window of opportunity to settle questions that have long been hidden under the carpet, pretending that they just do not exist. The reality in such cases is that like cancer, they never disappear. If not correctly treated they only come back in an even more malignant form. In the case of Kashmir they challenge some of the basic tenets of the state and pose questions that are of fundamental concern to India.

It is because of this that Major Maroof Raza's book titled "Wars and No Peace over Kashmir" has a particular salience today. He brings a perspective to this study that is not often found in other writings. Besides, he reflects the views of a new generation that is increasingly relevant.

An important characteristic of the Book is that it captures the essence of the problem in a concise but succinct manner. In seven short chapters Maroof provides an adequate examination of all major issues. Not detailed perhaps but sufficient to allow an understanding of the broader question. The first chapter is on history. In whole of India, Kashmir stands out as the one with an accurate and continuous recorded history. A history that is characterised by both brutality and natural calamity. Twin misfortune that has always plagued the hapless people of this enchanted vale. Yet, the principal characteristic that has defined its people is the harmonious blend of different cultural and religious influences. This has over the years led to a sense of tolerance in the true 'Rishi' tradition that has never deserted them notwithstanding the enormous stress of fundamentalist influences and outside propaganda. It is termed as Kashmiriyat, a unique characteristic that the people are determined to preserve.

Yet, the past is history. Relevant no doubt, as it impinges on the present, but one has to look to the future. In some ways perhaps the future begins in 1947. A time when the people displayed a determination to come together such as seldom seen since. The many developments of that era also proved to be a burden. For it imposed a baggage that continues to be carried, interpreted differently by different sections of the people. The author has described this

*Wars and No Peace over Kashmir. By Maroof Raza, New Delhi, Lancer, 1996, p. 176, Rs. 395/-, ISBN 1-897-829-16-7.

*Maj Gen (Retd) Dipankar Banerjee is co-director, Institute of Peace and Conflict Studies, New Delhi.

in crisp and precise words debunking some of the false notions that have been perpetuated for long. The question of accession to India, and the three wars that followed are described competently. Of more immediate concern is the prelude to the fourth and continuing war that began in December 1989 if not in July 1988.

Maroof may have dealt with the causes of the rise of insurgency in more detail. For, when looking for solutions in the future, it is important to know where things went wrong. He identifies only two main immediate conditions. One was Zia's exploitation of the situation arising from developments in Afghanistan. The other was the rise of Madarsa education and with it the spread of Islamic fundamentalism. Actually a number of other and more widespread conditions contributed to the deterioration of the situation in Kashmir. Political chicanery, enormous corruption in every segment of society taking cue from the top, cynical manipulation from the Centre and electoral malpractices were the principal reasons. This led to economic deprivation and destroyed the legitimacy of the State in the minds of its people. Deprived of this, the State lost any right to govern. Insurgency was then a foregone conclusion. Of course it was made worse by outside support and blatant intervention by Pakistan. A major weakness of Indian response to Kashmir has been a reluctance to look within and accept this basic condition.

The problem then is a blend of socio-political, ethnic and economic conditions. Its resolution too should be sought in rectifying these conditions. Instead the first mistake that the State invariably makes is to try to find a military solution, primarily through the use of force. This is the typical short-sighted, limited, knee jerk reaction that frequently proves counter-productive. Regrettably the military, which should know better, having been dealt the short side of the stick on innumerable occasions, meekly complies and willingly provides the political leadership with an alibi, it so desperately needs. A time has come to put a stop to this. The depredations of the politician cannot be covered up by anyone else. They alone have to find a way out of this or pay a price. It is a question of accountability that cannot be overlooked. It is only when this happens that responsible political options would emerge and attempts to find scapegoats after the event avoided. Anyway, it was once again the security forces, battling against enormous odds, that turned around the situation. It is a matter to ponder as to how many security forces around the world would have had the capability to successfully deal with a situation under such tremendous physical and psychological adversities. That the Indian forces do, should not be a licence to use them repeatedly. For in compliance they pay a very heavy price indeed that is not always easy to quantify.

The present situation in Kashmir is transitory. A successful, participatory

will proclaim himself the Guderian of the information age has yet to be recognized. But one fact is certain: the information revolution will continue to alter our world at an ever increasing pace whether we choose to engage ourselves in it or not. We cannot remain fixed on the third cycle of warfare for much longer. Already competing nations are striving to chip away at America's dominance in precision fires. Sooner or later someone will find a way to match or counter our firepower advantage. The result may well be equilibrium on the battlefield which might lead to stalemate or eventual defeat. Imperatives for innovation and change are overdue. We need to begin now to forge a new marriage between battlefield knowledge and unprecedented landpower speed. We must do no less than draw the outline for a new army whose structure is predicated on the premise that the machine age is past and the age of information has just begun.

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.

killing power. If these two essential elements of combat power are orchestrated with skill so that they are applied in harmony, an unfettered battleforce would be able to strike multiple vital points simultaneously or in a sequence of our choosing. In a very short time, perhaps only hours, such a force would be able to inflict a rapid sequence of local tactical disasters. The cumulative effect of these closely spaced events would serve to dislocate and confuse an enemy to the point that his warfighting structures quickly disintegrate. This confusion, dislocation and disintegration will combine to produce an unequivocal military decision with minimum cost to both sides.

EXPERIMENTATION AND INNOVATION

The image of a landpower force to accomplish such deeds is purely conceptual today. But certain realities have begun to appear dimly through the veil of the future. First, at a time when American arms will most likely be called on to win an offensive campaign cheaply, the third cycle seems to tell us that the advantage goes to the defender. The offensive cannot be restored by firepower alone because firepower cannot provide the essential decisive function necessary to end a campaign quickly on our terms at minimum cost. Second, even when preceded by overwhelming doses of precision firepower, a manoeuvring force cannot hope to succeed against a determined, thinking enemy if its speed of movement cannot exceed the twenty kilometer per hour pace of a third cycle force. An information age army must move at ten times that velocity. Finally, as in past cycles, technology promises a way out of this dilemma. The information revolution will give land forces both the mental agility and matching physical speed to restore the essential balance between firepower and manoeuvre on a future battlefield.

Henry Ford never met Heinz Guderian, the German General commonly held most responsible for exploiting Ford's invention to gain victory on the battlefield. Likewise, history will eventually produce the warrior who will capitalize on the opportunities offered by Bill Gates and the revolution most often associated with his name. The name and nationality of the warrior who someday

and comparatively free and fair election has now provided the State an opportunity to rectify past mistakes. It also provides a chance to set the new agenda. Are the country and the Government ready? The political process to find a lasting solution has begun. Tentative steps to cleanse the Administration and make it more effective has started. An attempt is being made to meet the people's aspirations. But there is nothing to suggest that there is an urgency. In large measure the State is drifting back to its earlier practices. The aspirations of the people are not being met. Terrorism continues as before.

The author has examined nine options to the Kashmir issue identified earlier by Professor Raju Thomas. It varies from maintaining the status quo, to the 'Trieste' type, with a number of intermediate options. Finding a solution that has some chance of success is in itself a major challenge. All the three parties to the issue, India, Pakistan and the people of Kashmir, would together have to evolve an acceptable solution. Pakistan, having almost 'lost' the proxy war would once again be at a great disadvantage. India needs to concede little. But finding an equitable solution is primarily an Indian responsibility. To do this it has to first put its own house in order. For, winning over the people to join the mainstream of national life is a challenge that is yet to be seriously addressed.

Maroof Raza has done a good job highlighting some of these complexities. He has produced a book that has to be read by a wider audience in the security forces and by a wider community. Then only will it contribute to a debate that must surely begin. That is the essence of democracy and the path to peaceful resolution of the situation.

Short Reviews of Recent Books

SPEC OPS : Case Studies in Special Operations Warfare: Theory and Practice. By William H. McRaven, *Novato, Presidio Press, 1995, p 402, $27.95, ISBN 0-89414-544-0.*

Special operations are defined, by the author, as those conducted by specially trained forces, equipped and supported for a specific target, whose destruction, elimination or rescue (in the case of hostages) is a political or military imperative. These differ from conventional operations mainly in the degree of physical and political risks, operational techniques, modes of employment and for their dependence on detailed operational intelligence. A successful special operation defies conventional wisdom by using a small force to defeat a much larger or well-entrenched opponent.

The author develops the theory that special operations forces can achieve relative superiority over even a numerically superior enemy if they prepare a simple plan, which is carefully concealed, repeatedly and realistically rehearsed and executed with surprise, speed and purpose. To prove his theory he carries out an excellent detailed analysis of eight special operations carried out in combat starting with the German glider borne attack on the Belgium fortress of Eben Emael, in May 1940, the feat of the Italian manned torpedo attack against the British at Alexandria in December 1941 to the Israeli rescue of the hostages at Entebbe in Uganda in July 1976. The narrative of each of the well known operations make excellent and very interesting reading. By his analysis of these special operations, the author is able to validate the need for a standing special operations force that is trained, equipped and supported at the best possible levels. This book is well worth studying for all those dealing with or interested in special operations.

-- Maj Gen (Retd) S C Sinha

The Air Campaign : Planning for Combat. By Col John A. Warden III Virginia, *Pergamon-Brassey's International Defence Publishers, 1989, p 160, $ 18.95, ISBN 0-08-036735-6.*

A threadbare discussion of planning of the third dimension of war - the war in the air. The Air Campaign vividly and illustratively brings out the function of air superiority on the outcome of war. The author stresses on the effective use of air power through mass concentration and economy of forces because of its inherent constituents, speed and range. The book is about practicing operational art by the air element commander and also the time honoured application of the Clausewitzian principles of war.

The book has been divided into ten chapters. Firstly, air superiority is a necessity and crucial to success; secondly, offence or defence - the Chess game if the Commander has a choice; thirdly, offensive operations if the battle is to be carried to the enemy; fourthly, defensive operations need careful thought and cool execution;

tially sustaining in character, might be removed from the combat zone entirely, relying on sure communications and rapid aerial logistics to deliver the goods and services of war to the combat zone in just the proper quantities just when needed. The combat force would become the second major group. It must be compact, possessing just the people and gear necessary to sense, track, move and kill. Many essential combat functions necessary in contemporary armies would displace from the ground upward into the exosphere and space. This "space to surface continuum" between close combat force and the information structures which sustain it from above would, in fact, form the central nexus of an information age manoeuvre force. In effect, space becomes the new high ground. When all the services occupy vertically oriented battlespace, the character of multi-service missions changes from the segregated land, sea and air operations to a new approach which will be characterized by total interdependence throughout this surface to space continuum.

UNPRECEDENTED BATTLE SPACE AWARENESS

The ability to see the battlefield and to know the enemy, combined with the speed to exploit these advantages, will fundamentally change the dynamics of fire and manoeuvre. A commander able to observe enemy movement, with fine granularity would be able, with confidence, to divide his own forces into comparably fine increments and position each precisely enough to control and dominate each discrete bit of enemy combat power. The ability to employ many small units at once would allow a commander to cover a large operational area with discrete combat elements. A sports analogy is particularly descriptive: a basketball team with superior speed, agility and understanding of the opposition would be more effective playing man-to-man rather than zone.

A commander with the dual advantage of speed and killing power will dominate the battlefield. Superior killing power allows incapacitation of an enemy force, a necessary capability, but by itself intrinsically indecisive. Superior mobility allows exploitation of the temporary advantage gained by the stunning effect of

again, on speed. The combination of knowledge and speed of movement will allow a future battleforce to anticipate enemy movement and turn costly force on force engagements of past wars into surer and less costly engagements by choice.

The combination of knowledge and speed will allow a battleforce to maintain an unrelenting tempo. In the chess game of operational planning, superior battlefield awareness will enable us to stay four or five moves ahead of an opponent. Speed will allow battleforces to shift quickly about the battlefield to check, block and, when conditions are optimal, strike in a ratio of friendly action to enemy reaction of, again, perhaps four or five to one. Thus the object of a manoeuvre force of this type will not be to kill so much as to paralyse, to exploit the ability to maintain a constant advantage of position in order to close an enemy's options, wear him down and eventually collapse his will. Speed of manoeuvre offers the essential finishing function that balances our already prodigious ability to kill.

The imperative for speed in this new form of warfare begins at home ports, airfields and installations. A highly lethal force, shorn of its Cold War impediments, will be able to project itself from the homeland or from strategic points overseas in days rather than weeks or months and arrive in the operational theatre ready to fight. The ability to get into a theatre "firstest with the mostest" reduces risk to forces first to arrive and prevents the enemy from setting himself into an advantageous defensive position. Early arrival will change the elemental patterns of war at the theatre level. Such a campaign will allow near simultaneous rather than sequential applications of both killing power and manoeuvre. Strategic speed will allow a theatre war to take the form of a 'coup de main'. The bloody, set piece, sequential campaigns of the industrial age will give way to sharp, intense acts of strategic preemption.

A landpower force optimized to capture the benefits of the information age would take on physical characteristics distinctly different from industrial age armies. First, such a force would be able to divide itself into two functional groups : the first, essen-

fifthly, limited operations are enemy dependent; sixthly, interdiction effectiveness is tied closely to either friendly or enemy ground situation; seventhly, close air support in the close vicinity of the forward line of troops; eighthly, reserves - operational - at all levels - help better the odds; ninthly, the orchestration of war through vitiating the centre of gravity as seen from enemy's eyes; and lastly planning the air campaign lays down the principles for general guidance and exploitation by the commander for a "Winning Campaign". The Air Campaign in prospect and in retrospect deals with the levels of war and the centre of gravity; and the criticality of air superiority and achieving it under different situations to win a war.

Chapterwise, crisp end-notes, select bibliography and some chosen photographs have enhanced the usefulness of the book.

A must for all air/air component commanders, surface forces commanders, staffs, joint staffs and the policy makers.

-- Air Cmde (Retd) S K Bhardwaj

The Line of Battle: The Sailing Warship 1650-1840. Ed by Robert Gardiner, *London, Maritime, 1992, p. 208, £ 28.00, ISBN 0-85177-561-6.*

This is a part of the 12 volume series titled Conway's History of the Ship, which aims at readership with knowledge and interest in ships.

The Line of Battle sub-titled-'The Sailing Warship 1650-1840' covers warships from evolution of the specialist line of Battleships in 1650's to the end of the sail as principle mode of propulsion.

Encyclopedic in content, the book provides extensive coverage of the subject under chapters 'The ship of the line'; 'The frigate'; 'Sloop of war'; 'The Oared warship'; 'Design'; 'Rigging'; 'Gunnery and Naval tactics'.

In the period under study, the Battle fleet became the arbiter of sea power and the merchant-man was banished from front line by technology that allowed guns to be placed on broadside, increasing the existing fire power. Enhanced sea worthiness and rugged construction led to different types of warship designs. The need for all weather scouts which could out sail the gunships and outgun the smaller ones led to the preliminary cruiser design. The requirement of attack on trade led to development of fast and more seaworthy but less heavily armed vessels. The tonnage increased from 1500 to 2500 tons.

The book has an interesting chapter on ship decoration. The head and stern designs owe their origin to civil architecture, classical Greek or Roman mythology.

The book is compiled by Brian Lovery who is a leading authority on the subject and the book is profusely illustrated and presented in a manner which even a casual reader would find captivating.

-- Cdr S Kulshrestha

The Art of Maneuver,: Maneuver-Warfare Theory and Airland Battle. By Robert Leonhard, *Novato, Presidio Press, 1991, p 315, $ 14.99, ISBN 0-89141-403-7, ISBN 0-89141-532-7 (pbk).*

In the high-tech nature and pronouncedly enhanced capability to anticipate and influence the course of modern battle, manoeuvre must acquire predominant status. Strategy planners and tactical commanders at each level would need to fully comprehend the manoeuvre-warfare in the future.

Robert Leonhard has masterfully discussed the commonly accepted tactical concepts, as well as the conventionality in their application. He then proceeds to expound how the critical vulnerability of the enemy should be targeted by the art of manoeuvre. Starting with a full chapter on definitions / interposition of military terms and the concept of Manoeuvre-Warfare, he relates his theory to air land battle and low-intensity conflicts of the future. Time and again he refers the reader to relevant cases in military history to strengthen his projections and theory and to make them easy to comprehend.

This book will enthral military leaders and thinkers alike. It makes an excellent treatise on strategy and tactics.

-- Maj Gen (Retd) S K Talwar

An Atlas of World Affairs, Ninth Edition. By Andrew Boyd, *London, Routledge, 1991, p 240, £ 10.99 (pbk) ISBN 0-415-06625-5.*

A common man, though has a good knowledge of what is happening in the USA, disintegration of the USSR, unification of Germany and so on, but has a very sketchy knowledge of the happenings in smaller countries like Zaire, Zambia, Yugoslavia, Afghanistan, Angola, Namibia and so on.

Atlas of World Affairs provides, in brief, an account – with maps – of the international issues and conflicts along with various changes which have taken place in Europe and Asia. Of interest are the chapters on Arctic, Antarctic and the Sea Laws about which an average reader does not know much.

Of particular interest to the readers in India are the two chapters - India and Pakistan I and III which give in brief the partition, the liberation of Goa, the Tamil problem in Srilanka when India gave assistance and the 1971 conflict with Pakistan.

A well researched and informative book which gives, in a concise manner, all the information which the students of international politics, may need. A good addition to all libraries.

-- Commodore (Retd) R P Khanna, AVSM

force possessing the ability to see with unprecedented clarity, to anticipate with unparalleled sureness, to accelerate the pace of movement with unequalled velocity and to maintain an unrelenting operational tempo. Such a force would be able to traverse the killing ground, however expansive and lethal, relatively untouched and decide the campaign with a violent and debilitating movement that ends quickly with minimum loss of life to all sides.

The fourth cycle of war will seek to exploit the information age in order to increase the velocity of manoeuvres. Speed must be the essential ingredient of a future landpower force. Speed will be achieved by creating a force unburdened by the logistical yoke that has long been the principal impediment to agility and speed. The secret of the dominance of the offensive in the second cycle was not to be found in the tanks, personnel carriers and self-propelled artillery of blitzkrieg armies. The secret lay, instead, in the ability of a portion of the manoeuvre force, in the case of the Wehrmacht just ten of a 117 divisions, to break free of the railhead long enough to reach deep into an enemy's rear with enough sustaining strength to collapse his psychological centre of gravity and hold it down long enough for following forces to solidify the victory.

Today the railhead has been replaced by an equally cumbersome and constrictive logistical umbilical cord. Like the Germans in 1940 we must develop the means to break a portion of our force free to achieve the same objective. The information revolution promises to give us the means. Information technologies will allow us to deposit outside the close combat zone all but those forces necessary to move, observe and kill. Detailed knowledge of the enemy's strength will free us from our traditional fixation on stockpiling and "worst casing" so that we will be able to carry with us into the close combat zone only what we need when we need it. In effect, we will know enough to know what to leave behind.

The information revolution should allow us to track the individual elements of a force with exquisite clarity and detail. But knowledge of the enemy alone is not enough. We must possess the means to act on what we know and action is dependent,

his will to resist and by allowing him to reconstitute. Decision is best guaranteed through manoeuvre of forces on the ground. Psychological collapse, the breaking of an enemy's will to resist, comes when an opponent finds himself challenged and blocked wherever he turns. He admits defeat when further pursuit of his political objective is not worth the cost or when his centres of gravity are threatened, controlled or occupied and he has no remaining options for restoring them.

THE BALANCE BETWEEN LETHALITY AND MANOEUVRABILITY

To avoid the horrors of protracted firepower-attrition warfare in the future, we must be sure to maintain a delicate symbiosis between the ability to kill and the ability to manoeuvre. Easier said than done if one assumes that we still dwell in the third cycle of warfare, a period that favours the defender. As we gaze into the distant future and face the prospect of a competent enemy with both the will to fight and the means to develop or purchase his own systems of precision firepower, the prospects of winning a third cycle conflict become even more sobering. Possessed with the intrinsic power of the defensive and most likely defending on familiar terrain, such a foe would not necessarily have to defeat us tactically to win the conflict. He would most probably bow to our overwhelming superiority in the air and at sea and concede both. He would not have to seek victory so much as the avoidance of defeat. He would only need to preserve his ground force in the face of superior firepower, long enough to create stalemate and cause enough casualties for the Americans to tire of the contest first. Again, an enemy possessed with a will to fight at the beginning of a conflict is likely only to grow stronger over time without direct intercession and eventual domination on the ground.

THE OFFENSIVE MUST BE RESTORED

The restoration of the offensive as the dominant form of war will come with the appearance of a fourth cycle of warfare, a cycle defined more by the new revolution in information rather than the stale remnants of the machine age. Imagine a manoeuvre

My Enemy's Enemy: Lebanon in the Early Zionist Imagination 1900-1948. By Laura Zittrain Eisenberg *Detroit, Wayne State University Press, 1994, p. 219, £ 29.95, ISBN 0-8143-2424-X.*

This book is a result of extensive archival research, interviews and newspapers of those days to establish the historical roots of Israeli involvement in Lebanon. This historic dissertation focuses on the little known facts about Zionists initial romancing with Maronites — a Christian Catholic sect of Lebanon — between 1900 and 1948 who were dominating it politically despite being a minority. The aim of establishing cordial relations with such a non-Arab dominating force in neighbourhood of Israel (as and when created), surrounded by Muslim majority countries was considered apparently to be beneficial to Israel, but this minority alliance approach later proved unproductive.

The age-old adage that "my enemy's enemy is my friend" augured well for the Zionists and seemed to suggest that Christian communities fighting Muslims in Lebanon would find the Palestinian Jews a natural ally. However, the other side of the coin also appeared correct. The minority Christians in Lebanon were afraid of the wrath of majority Muslims in case Maronites developed intimate relations with Zionists. Similar arguments applied to other Christian denominations, Shias and the Druze in Lebanon. The end result was non-action and wavering by Jewish Agency towards Lebanon and Lebanese minorities towards Israel, till its creation in 1948.

There appears to be no justification as to why Zionists persisted in courting Maronites despite their being proven unreliable allies time and time again. Perhaps Israelis' experience in Lebanon between 1900 and 1948 later contributed to the formulation of its "minorities policy".

-- Maj Gen (Retd) J N Goel

In Viceregal India 1916-1921: The Letters, Volume 2 of Ralph Verney. Ed by David Verney, *Cornwall, Tabb House, 1994, p. 211, £ 20.00, ISBN 0-907018-93-9.*

The book is a collection of letters written by Ralph Verney, a British Army Officer who served as Military Secretary to Lord Chelmsford.

The book, edited by Ralph's son David, provides an insight into the British officers' social and cultural life in India. The princely States of Gwalior and Jaipur have been graphically described. Accounts of travels to different parts of colonial India such as Burma, Frontier, Simla etc are highly readable. Verney has made extremely interesting comments on the personalities of his colleagues and friends as also about numerous places he visited and people he met. The period between 1916 to 1921 was an era when the British colonial power touched its zenith and grandeur essential for the maintenance of power and authority in a diverse and great sub continent like India, is clearly reflected in Verney's correspondence. This period also witnessed the emergence of Mahatma Gandhi as the leader of a mass national movement which led to the successful overthrow of the British Raj. The book contains some rare photographic plates depicting important landmarks as well as events.

A well-produced book, recommended for students of South Asian Social History, diplomats and officers of the armed forces.

-- Mohun Kudaisya

Full Ahead : INS Shivaji Golden Jubilee 1945-1996. *Lonvale Commanding Officer, INS Shivaji, 1995, p. 1996.*

Full Ahead is the story of INS "SHIVAJI", in picture, the premium establishment to train engineering officers and sailors of the Indian Navy. The establishment completed its 50 years in February, 1995.

The book gives in detail, in picture, the details of the modest training in 1945 to a full fledged training establishment to cater to the need of training both officers and sailors who keep the ships of the Indian Navy on the move.

The book brings forth memories to the engineers - both present and past - who have at one time or the other had the privilege of serving in Shivaji.

A light reading with excellent photographs and should find a place in all naval libraries both afloat and ashore.

-- Commodore (Retd) R P Khanna, AVSM

Tower of Secrets : A Real Life Spy Thriller. By Victor Sheymov, *Annapolis, Naval Institute, 1993, p. 420, $ 24.95, ISBN 1-55750-764-3.*

Drawing on his first hand knowledge of the world's most efficient and ruthless espionage network - the KGB of the USSR, Victor Shenoy has spun out a gripping story-more fact than fiction. In this expose, he has not only described the integrated technology of modern security and surveillance systems, but also dealt with the extensive staff and field operators cadre, a highly secretive network in itself.

Victor Sheymov provides a clear insight into the intricacies of espionage and counter-intelligence in its global manifestation, which would enthuse most readers.

-- Maj Gen (Retd) S K Talwar

Nuclear Nonproliferation : A Primer. By Gary T. Gardner, *Colorado, Lynne Rienner, 1994, p. 141, Price $ 10.95 (pbk) ISBN 1-55587-489-4.*

This is another "hot" topical subject, much debated and written about in recent times. This volume by Gary T Gardner, who is a consultant with the World Bank, is another addition, to the wealth of literature, available on the subject. It gives an overview of the technical and political dimensions of nuclear non-proliferation.

He guides the student of arms control, through the fundamentals of nuclear physics, nuclear reactors and the nuclear fuel cycle in simple language. He likewise

lethal space a hundred times as large. Thus, in a conflict involving two roughly equal or symmetrical forces, evidence seems to show convincingly that the advantage goes to the defender.

Today, seven years after the prospect of a Soviet blitzkrieg has crumbled with the same finality as the fall of the Berlin Wall, we seem strangely content to remain frozen in the third cycle. 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 the capacity to kill with greater and greater efficiency. Perhaps in our continued rush to embrace precision warfare we might find ourselves embracing a method of fighting that grows increasingly obsolete and more irrelevant with each passing day.

THERE IS NO SILVER BULLET

Arguments against a firepower centred approach to warfare have been with us since the earliest days of the industrial age. War is a deadly business. Yet the object of war is not to kill the enemy so much as it is to break his will to resist. No matter how efficient and precise a firepower system might be, victory is rarely defined by killing everyone on the other side. The extension of influence or control by force is more powerful and palatable than genocide through firepower. Therefore, our object in applying firepower must be to gain advantage. Unfortunately, recent experiments in the laboratory of real war substantiate the view that the paralytic effects of firepower erode quickly over time. Soldiers become inured to hardships and danger. Firepower that might break an enemy formation early in conflict eventually becomes merely a nuisance once soldiers accustom themselves to firepower's pyrotechnic drama and devise effective means to deflect, deceive, dissipate and protect themselves from firepower's killing effects.

To win quickly and decisively at low cost in the future, we must have the means to conduct the battle quickly and to end it cleanly, preferably at the moment when the paralytic effect of firepower is greatest. To delay beyond that moment only increases the killing and makes the enemy more effective by stiffening

time and restored dominance to the offensive. Motorized armoured vehicles allowed soldiers to cross the deadly zone protected and at enormously greater speed. Large units could now dash great distances into the enemy's rear to strike at his brain and avoid his powerful extremities. The object of Blitzkrieg became the collapse of an enemy's will to resist. Victory was gained through psychological paralysis induced by movement rather than through butchery induced by massive application of firepower.

After World War II, the Western Powers faced another tactical and operational dilemma. The problem now was to halt a Soviet style blitzkrieg across the Northern German Plain. Tactical forces needed defensive killing power to absorb the initial Soviet armoured shock and hold their defensive position. The operational problem was to strike deep with long range firepower in order to slow the rate of arrival from follow-on armoured forces at the front line. Billions of dollars and the collective genius of a generation of brilliant minds succeeded in developing a remarkable set of technologies capable of stopping a mechanized offensive with precise, long-range killing power. Microchip technology provided the tools necessary to extend the killing zone and made targets easier to find, track and kill. Signs foretelling how the defensive's return to dominance might turn the cycles of war a third time, began to appear as early as the closing days in Vietnam. A few laser guided bombs destroyed targets that had previously required hundreds of unguided dumb bombs. In World War II an average of eighteen rounds were needed to destroy a tank at a range of 800 yards. During the 1973 Arab Israeli War the average was two rounds at 1200 yards and by Desert Storm one round at 2400 yards.

The ability to see and strike deep using ground and aerial platforms served to expand the battlefield by orders of magnitude. What was once a theatre area for a field army now became the area of operations for a division or a corps. Just as an army moving at two miles per hour could not cross a killing zone dominated by long-range, rapid-firing, rifled weapons in 1914, the precision revolution made it prohibitively expensive for an army moving at seven times that speed to cross an infinitely more

explains clearly, the evolution of the nuclear non-proliferation regime, the system of international nuclear safeguards and the prospects for the extension of the NPT.

Chapter 9 of this volume is of special interest, as it deals with Nations of Proliferation concern, including India, which according to the author, started stockpiling of nuclear weapons w.e.f. 1986.

This book is recommended to students of Arms Control in particular and to the other readers, in general.

-- Maj Gen (Retd) Ram Nath, SM

Britain in the Twentieth Century: A Documentary Reader : Volume I 1900-1939. Ed by Lawrence Butler and Harriet Jones, *Oxford, Heinemann Educational, 1994, p. 344, £ 12.99, ISBN 0 435 31924 8, 0 435 31922 1.*

Produced by the Institute of Contemporary British History, to promote the study of history with a difference. It is a source book of the documents — on which the student may use his or her own analytical skills-to develop a prospective. Included is a warning, against being gullible - for example the "Times" report on Chamberlain's agreement with Hitler - Doc 11.7 does not represent the then public opinion.

Each document has to be analysed, based on - who was the author, what were his or her motives; when was it written and for which audience? Thus, in fact, no documentary evidence can be accepted at its face value.

For Indians, whose political future, during those years was dependent on British imperial policy, Chapter 8 and the documents such as the statement of Brig Dyer to Hunter Committee after Jalianwalla - Doc 8.8 and the report of the Governors on the spread of the civil disobedience in 1930, are of interest. Other items of interest, of late thirties, include — the rise of Mosely's Fascists and the abdication of the King.

A thought stimulating book - highly recommended.

-- Maj Gen. (Retd) Partap Narain

Britain in the Second World War : A Social History. Ed by Harold L. Smith, *Manchester, Manchester University, 1996, p. 189, Price £ 12.99 (pbk) ISBN 0-7190-4493-6.*

A nation at war is inevitably faced with large scale mobilisation of manpower for its armed forces, internal security, and transportation. Damage by enemy action to life and property both in the battle zone and in civil habitat far removed from battle fronts, are also factors of disruption of day-to-day life.

During the Second World War, Britain faced the impact of transit of large allied forces of different nations, races, cultures, and social attitudes. The effect of all these on society makes an interesting area of study.

Harold Smith has collated and reproduced numerous reports, records of offici and personal views, and governmental policy, covering aspects of public life in th publication; extending to crime, loot, plunder, black-market and hoarding which fu ther strained the administrative machinery.

This book is a useful reference work for social research.

-- Maj Gen (Retd) S K Talwa

Israel's Nuclear Dilemma. By Yair Evron, *London, Routledge, 1994, p 327, £ 42.5 ISBN 0-415-10832-2.*

This book focuses on the Israeli dilemma of declaring an overt nuclear postur as a geo-military-strategic deterrence on Middle Eastern political canvas. The con struction of a reactor at Dimona started in 1958 with French assistance and later i 1960, Israel had to declare that it was a research unit and had no intention of devel oping, possessing or introducing nuclear armaments. Israel also declared that it woul not be the first one to introduce nuclear weapons in the Middle East nor be the secon as added later by Allon Yigal, an influential Mapai leader and Deputy Prime Ministe under Golda Meir.

Vanunu's revealations in November 1986 and consensus amongst internationa experts indicate that Israel possesses nuclear capabilities and is ahead of other nuclear "threshold states" like India and Pakistan. An explicit nuclear doctrine has not ye been enunciated by Israel and they are still preferring an ambiguous posture. In other words policy of conventional deterrence would continue.

Deterrence was, at various times, an important dimension of Israeli political and strategic doctrine hoping to solve all problems through military means. In November 1966 Egypt signed a Defence Treaty with Syria to control its military activities and also to deter Israel. The Treaty failed in both respects. Syria was uncontrollable and Israel was not deterred. The result was the October 1967 War.

The author argues convincingly that the adoption of a nuclear doctrine and possession of nuclear arms would not provide a solution to the security dilemma of Israel. Further the inherent dangers of proliferation in Middle East by other Arab countries would get multiplied if Israel goes nuclear.

-- Maj Gen (Retd) J N Goel

Clement Attlee. By Jerry H. Brookshire, *Manchester, Manchester University Press, 1995, p. 257, £ 45.00, ISBN 0 7190 3244 X.*

This biography by Jerry H Brookshire concentrates mainly on the socialist in Attlee which he was able to integrate with democracy.

The book traces Attlee's role in Indian independence from the time he came as part of the Simon Commission in 1928. He was disturbed by the inefficiency, corruption and mediocrity of Indian politicians (a view which he later corrected). He believed that Indian self-government must be based on an established democratic electoral base and not on a single party and its appointees. He did not fear Congress

cipally by technology. Should we find a common pattern in technological cycles and if we accept the premise that technology will continue to drive future change, then we should be able to use the recent past to fix the central axis aligning those cycles and project it into the future.

Technology began to dominate patterns of change with the rise of industrial production and the appearance of precision war-making machinery like rifled weapons in the mid Nineteenth Century. The small bore repeating rifle, the machine gun quick firing field artillery extended the deadly zone, or the distance that soldiers had to cross to turn a defender out of his position, from 150 metres in Napoleon's days to a thousand metres or more by the end of the American Civil War. As the deadly zone increased by nearly a factor of ten, the risks of crossing it were further multiplied by the lethality induced through the precision and volume from the massive proliferation of repeating arms. Thus, technology favoured the defender. Images of the terrible slaughter of World War I remain as testimony to the cost in blood exacted by an operational method that relied principally on killing effect to achieve decisive results.

Before the slaughter ended, military professionals on both sides of no-man's-land sought to solve the tactical and operational dilemmas imposed by dominance of firepower on the battlefield. The tactical problem simply was to cross the killing zone alive. The operational problem was to make a successful crossing militarily decisive. Once across, a force had to reach deep, concentrate and strike to dislocate opposing force. The conceptual solution, the innovation came first to the Germans in 1918 and it was deceptively simple: short, highly intense doses of firepower to prepare the assault, small units to exploit the shock effect of firepower in order to infiltrate and bypass centres of resistance, operational formations to move through exposed points of weakness to push deep into the enemy's rear. While the Germans had the method, they lacked the means to translate theory into effective action. After the war, the development of the internal combustion engine provided the means. The graft of practical science to an innovation born in war turned the cycle of war a second

Cycles of War and Information Age Warfare

MAJ GEN ROBERT H SCALES, Jr

The nature of warfare, like other forms of collective, complex human behaviour, changes slowly. Cycles of change in warfare are particularly difficult to comprehend and even more difficult to anticipate because, unlike endeavours in finance, medicine or law, active experience in war is, thankfully, infrequent. Because warfare cannot be practiced often, soldiers are obliged to rely on the laboratory of past experiences to gain vicarious experience in war.

THE CYCLES AND PATTERNS ARE EVIDENT

Before the advent of the industrial age, study in the laboratory of past wars served soldiers well. Cycles of change were centuries long and factors that generated change such as demographics, politics and relative power among contenders, while not necessarily predictable, were at least constant and familiar enough to give soldiers confidence that data derived from past campaign would remain relevant and useful as signposts into the future. Since the beginning of the industrial age, technological warfare–the applied science of killing-has eclipsed all other dynamics of change. For many, this magnitude and newness of science threatens the reliability of precedent as a useful mechanism for predicting the course of war.

To be sure, the frenetic pace of technological change in the modern world has served to compress the interval and stretch the amplitude of the cycles of change. Nonetheless, identifiable cycles remain. If our historical laboratory serves us, we should be able to search the recent past to identify new cycles driven prin-

Maj Gen Robert H Scales Jr is Deputy Chief of Staff for Doctrine US Army Training and Doctrine Command. In 1991, he was with the Pentagon as the Director, Desert Storm Special Study Group, and is the principal author of *Certain Victory* the official Army account of theGulf War.*Firepower in Limited War*, a history of fire support in post-World War II conflicts, is his latest work.

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dominating the Indian Government for a short period. He projected that Congress would dissolve into competing political parties championing different policies. Despite the fact that Attlee as Prime Minister (PM) had no control over conditions within India–neither the Indian leaders nor the people, he nevertheless, did handle the timing of the transfer.

Attlee was both a politician and a socialist. The combined experience of leading the Labour party in the war – time coalition and of participating intensively in government decision – making made him better prepared for the office. He supported the triangular relationship of trade unions, management and government and felt that radical changes during post war period may jeopardise labour's social services programmes. The Labour Government significantly improved social conditions while maintaining social stability thus setting the pattern for the British nation for future decades.

The book concludes that Attlees was a successful politician and a socialist.

-- Cdr S Kulshrestha

Never Fight Fair! : Navy Seals' Stories of Combat and Adventure. By Orr Kelly *Novato, Presido Press, 1995, p. 337, $ 22.95, ISBN 0-89141-519-X.*

"If the enemy expects an attack tomorrow, hit him tonight. If he expects you to come by sea, arrive by parachute. If he watches for you in a helicopter, arrive as a tourist by an airliner. If he expects a hand-to-hand combat or a knife fight, shoot him. If he expects you to fight by some set of rules, throw the rule book away". This, as the author writes, paints the true picture of what SEALS do. Orr Kelly, a veteran defence correspondent who has worked for various US newspapers, could not have chosen a truer title for this fascinating book.

Predecessors of SEALs were formed during the Second World War as Naval Combat Demolition Units. These were followed by Underwater Demolition Teams and finally SEALs (Sea Air and Land) who saw extensive action in the Pacific and in Europe. This book is an oral history, as told to the author by the creaters of mayhem. After WW II SEALS took part in the Korean war and then were made responsible for the recovery at sea of Gemini and Apollo astronauts. Their work was legendary during the Vietnam war. They also took part in some of the famous actions like the *Achille Lauro* rescue mission to the island of Grenada in 1983.

A highly readable book which confirms the old saying that truth is stranger than fiction.

-- Cdr (Retd) S Varma, SC

Firepower in Limited War. By Robert H. Scales, *Novato, Presidio, 1995, p. 340, $ 32.50, ISBN 0-89141-533-5.*

The end of the Cold War ushered in a uni-polar World leaving the United States of America as the only super-power. As the most powerful nation, the US has to help in the maintenance and enforcement of peace amongst the comity of nations. Paradoxically the present day American Society, especially after its involvement and traumatic

experience in Vietnam, is unwilling to accept the loss in human lives that is likely to result from the intervention of its Armed Forces in foreign wars, however limited their scope and duration. Therefore, when forced into such commitments, the US Armed Forces wish to accomplish with firepower what would otherwise have to be done by manoeuvre and manpower, necessarily involving casualties in men.

There are, however, limits to the use of fire-power in limited wars. Maj Gen Scales has, in this book, done a very frank and detailed analysis of the role played by fire-power by examining the course of five limited wars. He has given interesting accounts of the two wars in Indo-China, the Russian intervention in Afghanistan, the British action in the Falklands and the Allied Operations in the Gulf War.

Of particular interest are his accounts of the American intervention in Vietnam and in the Gulf War. He brings out clearly how the balance between firepower and manoeuvre is determined by the specific nature of the war, the type of terrain and the quality of the enemy troops. The author shows how the tough, well led Vietminh troops, fighting in favourable jungle clad terrain of Vietnam, were more difficult to destroy by massive firepower alone; than tanks, artillery and poor quality Iraq troops in the open deserts, devoid of cover, in the Gulf War.

-- Maj Gen (Retd) S C Sinha

Image and Reality of the Israel - Palestine Conflict. By Norman G. Finkelstein, *London, Verso, 1995, p 243, £ 14.95, ISBN 1-85984-040-X (pbk).*

This dissertation contests the prevailing view that Palestinians were illegal immigrants in Palestine between 1893 and 1948 and the Jews were in majority at the time of creation of Israel.

The contention of Israel that the mass flight of Palestinian Arabs from Israel during Dec 1947 to Sep 1949 was a preplanned result of broadcasts to the Palestinians to leave their homes for the advancing Arab armies to wipe out Israel, did not sound logical as any advancing army would need sympathizers from local population and also information about enemy's army units, terrain and local resources. On the other hand this mass exodus was engineered under Plan D by Israeli Defence forces using fear psychosis, general panic, terror, recorded broadcasts and at times shelling of Arab localities.

Zionism is not only a religion but also a romantic nationalism where all arguments were twisted in favour of Jews. Jewish nation-state implied that jews would have the ownership rights and Palestinian Arabs would be permitted to reside. The hidden interpretation was that non-jews leave the State.

The author conclusively proves by documentary evidence that Israelis were the blatant aggressors in 1948, 1956 and 1967 Wars whereas the Arabs were the innocent victims. The myth that Israelis were fighting for their very survival and they had retaliated stood exploded. A totally new angle to the Israel - Arab/Palestinian relationship backed by documents. An interesting book.

-- Maj Gen (Retd) J N Goel

Latvia, Estonia and Lithuania, and historical animosities, as also access to the vital naval facilities at Kalinigrad. With Ukraine over control and use of the Black Sea facilities, and the local ethnic Russian population. And the problem over Georgia and Chechnya. One cannot see any of these issues overflowing into serious conflict but they may well engage the international community for resolution.

What therefore is the prognosis? I do not foresee any large scale war in the immediate future, certainly not a "HOT" one; a "COLD" one is possible. Some local conflicts may take place, but they will get contained either by the efforts of regional players or groupings, or by the international community in the form of the United Nations, or powers like the USA. The main areas of concern, in order of importance will be, West Asia (the Arab/Israeli stand-off), Africa, and Taiwan. The USA will strive to retain dominance but may be strongly contested by China, though the advantage will remain with the former for some years yet; however, we may see the emergence of power centres other than the USA. Overall stress will be on economic reconstruction and stability, and the improvement of the living conditions of the deprived sections of the international community. I would like to conclude by reminding you of what I feel are likely to be the factors that will affect the people, particularly those of the developing countries, namely the trans-national issues - proliferation of small arms, terrorism and international crime, in the form of drug trafficking; the earlier we replace symbolism and rhetoric on these aspects with concrete measures, the better we would serve succeeding generations.

the forces of the Taliban have taken control over most of the country. and appear to be closing in relentlessly on their opponents. What the outcome will be and whether or not fighting will continue for some more time are matters of speculation at present. However, events in Afghanistan are not likely to have any serious international effects, other than some fallout in Tajikistan and Pakistan, both of which will need to be handled by the respective countries: in the former case, may be with some assistance from Russia.

South Asia as a region will continue to have some tensions as before; ethnic strife and insurgencies, some rooted in separatist movements and possibly assisted externally. But there is unlikely to be any large scale conflict that would have international repercussions. In fact, the only destabilising factor of international concern may be the proliferation of weapons and the activities of drug cartels in Pakistan, possibly even spilling over into other South Asian countries, in due course.

South East and East Asia will also continue to be regions of relative stability in the foreseeable future, with some local tensions induced by ethnic and separatist movements. The overriding concern of the countries at the moment is maintaining the pace of their respective economies. They are however conscious of the towering dragon in their midst and are discreetly forming regional security groupings within the ASEAN and also overtly or discreetly, seeking continued US presence and links in the region. The main factors that impinge on the security perspective of the region are the continuing disputes over the Spratlys, and the Taiwan issue. Whereas the former may remain latent, with the occasional outburst, the Taiwan issue has the potential of a major eruption, should the Peoples Republic of China decide to test the genuineness of US support to Taipei; the impending Cold War between the USA and China may then become a rather hot one.

Finally, let me deal with Russia, separately only because of some of the peculiar problems that are the legacy of the dissolution of the Soviet Union; all the problems lie within the European sphere. In the Baltics, related to the Russian minorities in

Imperial Germany 1867-1918 Politics, Culture and Society in an Authoritarian State. By Wolfgang J. Mommsen, *London, Arnold, 1995, p 304, £ 14.99, ISBN 0-340-59360-1.*

Many books have been written on the history of this period of Germany which, unfortunately, have all been under the giant shadow of the Iron Chancellor, von Bismarck. As the author Dr. Mommsen, an eminent historian and Professor of History at the Heinrich Heine University, Dusseldorf Germany, writes, "At no stage of its existence did the German Empire cast aside the traces of its authoritarian origins in the masterful power politics of Bismarck." In this book, which comprises of a series of essays written over a period from 1973 to 1991, the author has looked at this era of German history differently.

His essays depict the German Empire as a System of Skirted Decisions, wherein he has shown the reasons for this dominance over the social history of that period. He has highlighted the emergence of the power of the Prusso-German state and how it came to overpower the older cultural traditions. It effected all areas be it international relations, the economy, internal politics, arts and education.

The Industrial Revolution came late to Germany. it changed its economy from agrarian to a leading industrial power in the world. It led to an aggressive foreign policy and a face off with the leading imperialist nation of that time, Great Britain. This is turn affected all areas of German activity and ultimately led to the Great War. The author has highlighted the effects of the war on German economy as well as the causes that led to the demise of the Wilhelmine Empire.

This is a fascinating book and is highly recommended to all.

-- Cdr (Retd) S Varma, SC

Kashmir: Resolving Regional Conflict : A Symposium. Ed by Robert G. Wirsing, *Meerut (India), Kartikeya, 1996, p. 217, Rs. 300.00, ISBN 81-85823-13-8.*

Recently a spate of books on Kashmir, have been published, as the present status of Kashmir continues to plague the relations between the two countries and is a potential "flash point". India has accused Pakistan of sponsoring terrorism but Pakistan denies these allegations and reserves her right to morally support the Kashmiri right to self-determination.

The Centre for Asian Studies of the University of South Carolina, sponsored a symposium on Kashmir, to hear and respond to views on how the problem could be solved. This volume contains the text of eight formal presentations, plus the open discussion that followed. The presentations include two American, two Indian, two Kashmiri, one Pakistani and one international human rights perspective.

Everything said during the symposium was controversial. We are well aware of our stand point, on the dispute. It is thought provoking and interesting to read the opposite views; some of which may not be palatable. There is no denying the fact, that serious mistakes have been committed in handling Kashmir.

An interesting book, which is highly commended.

-- Maj Gen (Retd) Ram Nath, SM

Super Power India and the Indian Ocean. By Madhurendra Kumar, *Allahabad, Chugh Publications, 1995, p. 311, Rs. 500/-, ISBN 81-95613-95-8.*

The last Chief of the Naval Staff, just before retirement, drew the Government's attention, to the need of strengthening the Navy and how inadequacy of funds, was adversely affecting the force level. In 1962, the country had the traumatic experience of Himalayan blunder. The Indian defence planners must ensure, that we do not now, inflict on ourselves an Indian Ocean blunder. Naval strategist A.T. Mahan wrote in 1900, that, "whoever controls the Indian Ocean, dominates Asia. This ocean is the key to the seven seas. In the 21st century, the destiny of the world will be decided on its waters".

The importance of Indian Ocean cannot be over-emphasised. India lost its independence, when it lost command of this ocean in the 16th Century. Subsequently, in the 19th Century, the ocean became a "British lake", thus facilitating the establishment of the British Empire. The Indian Ocean has special significance to India, which has a large coastline, with vast resources in the Exclusive Economic Zone and through which trade routes radiate. The bulk of Indian trade is by sea. The militarisation of the Indian Ocean, has ominous signs for the security of our country. Though India has declared that this ocean, should remain a zone of peace, the realities of geo-political and geo-strategic imperatives, inspire little confidence in achieving this goal. However, India can play a decisive role, by being a strong naval power.

The book discusses, the strategic issues involved in the Indian Ocean region. It examines the nature and implications of super power rivalry and how it impinges upon India's security. It also examines, why a 'Blue Ocean Navy', would be of vital importance, for safeguarding India's strategic interests in the Indian Ocean.

The book would be of interest to defence strategists in particular and other readers in general.

-- Maj Gen (Retd) Ram Nath, SM

The Naval Institute: Guide to World Military Aviation 1995. By Rene J. Francillon. *Anna polis, Naval Institute Press, 1995, p. 745, ISBN 1-55750-252-8.*

An excellent, authoritative, comprehensive and single source reservoir of knowledge on world military aviation. It includes the much sought after organisation and order of battle of the various air forces, army air components, naval aviation and paramilitary aircraft of different nations of the world. It incorporates details on mission, armament, crew, sighting systems, avionics, survivability features, power plants, mass and flight performance/configurations. The reference book is profusely illustrative and diagrammatically explanatory.

conflict, but that requires statesmanship of a very high order, particularly from the USA. In the first place, the USA and some of her Western surrogates, need to shed what is nothing more than an obsession about countries like Iran, Iraq and Libya. Should their perceived isolation be removed, it may become more feasible to obtain their assistance to prevent attempts at destabilisation of established regimes in the region. Simultaneously, it would be in the interest of the USA, and in conformity with her declared democratic traditions, to encourage the autocratic monarchies to allow more democratic activity in their countries. Together with all this, must continue the US pressure on both Israel and the Palestinians, to restore the peace process. Only the USA can deal with the developments in this region; it is strictly off-limits for anyone else; nor can one see any other actor or set of actors, having either the clout or the credibility to play a role independent of the USA.

With the collapse of the erstwhile Soviet Union, and the developments in Afghanistan, Central Asia has emerged as a region where the situation appears to be rather fluid at present. The only factor which could have security implications, particularly to Russia, is that of possible radical Muslim dominance of the region. Such a development would also be of some significance to China. While most of the regimes in the region are secular in nature, some of the links developing with Iran and the emerging support for the opposition forces in Tajikistan from the Taliban in Afghanistan, may be causing concern in Moscow. However, all things considered, no large scale conflict in the region is likely. The USA, Russia, and Iran, have vested interests in keeping the region stable. In any case, as West Asia-North Africa is considered an area of exclusive US concern, the Central Asian Republics may be considered, at least for the time being, the exclusive domain of Russia, in terms of security concerns.

The Afghanistan imbroglio is altogether another factor. After the withdrawal of the forces of the erstwhile Soviet Union, and a period of jockeying for power by the various factions, culminating in serious infighting, the world appeared to ignore Afghanistan altogether and left it to its own devices. That is, till recently, when

flict for some years to come, it appears. Rwanda, Burundi, Angola, Mozambique, Liberia, Somalia, and so on, will need to be assisted in tackling the division in their societies generated by ethnic and tribal loyalties, but accentuated by years of deprivation, poverty and economic disparities. Whereas there is some role for regional actors in containing the scope for conflict and in assisting these countries set themselves on a sound economic and social footing, greater involvement of the developed world would be essential, both in economic terms, as well as, in political thrusts for negotiations and compromises. Relatively more stable regimes as in South Africa, Ghana, Uganda, Nigeria, Zambia, Tanzania, and Kenya, will need to exert themselves regionally. Even so, while the scope for continuing conflict remains, there is no likelihood of this assuming international dimensions, that were evident in the Cold War era.

The most volatile region is that of West Asia and North Africa, where a number of explosive issues provide the ingredients for serious threats to international peace and security. The region is of prime significance and interest to the developed world; firstly, because its oil resources are crucial to the USA, Europe and Japan; secondly, Islamic fundamentalist movements, as in Algeria and Sudan could result in refugees pouring into Europe and also in destabilising moderate regimes like Egypt and Tunisia, and the pro-West monarchies like Saudi Arabia and the other oil-rich sheikhdoms; thirdly, the belligerence of countries like Iran, Iraq and Libya, because of their being labelled by the USA and some others as "rogue states" and sanctions (official or unofficial) being imposed on them, could provoke the USA to undertake measures that may well lead to confrontation and possibly some hostilities, resulting in destabilisation of the region as a whole; fourthly, the Arab-Israeli stand-off could result in the collapse of the painstakingly put together peace process, followed by resumption of large scale Palestinian and Hizbollah attacks on the Israelis and Israeli counter attacks. Should all this escalate beyond tolerance levels, another bloody war would appear inevitable.

Much can be done to prevent this region from sliding to

Cross reference indices, aircraft manufacturers by corporate names; airforces and aircraft designations in different languages have further enhanced the usefulness of this reference work.

The book must find its rightful place in all defence libraries.

-- Air Cmde (Retd) S K Bhardwaj

The Law of International Organisations. By N.D. White. *Manchester Manchester University Press, 1996, pp. 285, £ 14.99, ISBN 0 7190 4340 9 (pbk)*

This book is under the aegis of Melland Schill Studies in International Law. It is a compendium of what goes into the making and functioning of international organisations, such as the United Nations. The author has analysed these organisations on the basis of different theoretical approaches such as the legal framework, functional, positivist, rational, relative, revolutionary and so on. The book focusses on relationship between sovereignty of the state and the various organisations involved in the decision making process particularly in the field of defence and national security. The Chapter on comparative analysis between the League of Nations (LON) and the United Nations (UN) gives reasons why the UN is an improvement over the LON. The author has also dealt with regional bodies and their relationship with the UN. In the process, doubt arises as to whether regional bodies would help stabilise the world polity or would prove to the contrary. What is clear is the dominant position of the UN over all other organisations as the final arbiter of peace and stability in international relations.

The Chapters on collective security, military measures, human rights, economic sanctions and peace keeping are informative and interesting. The author has included exhaustive details in a simple format.

-- Dr. Sudha Raman

Memory Hold the Door Ajar : Reminiscences. By K.L. Pasricha. *(New Delhi : Intellectual Press), Rs. 200/-, ISBN 81 7076 81 3.*

A true story of the grit, perseverence, honesty and sincerity to job, this book provides an insight to the functioning of administration in certain states which may well be true of other states in India. The travails of our multitude poor and the general apathy and inability of the administration to reach out to them is not unknown and yet it impacts on the reader the way it is discussed. The author is effective in presenting this aspect and the ways, of the able and not so able government workers, in the gigantic administrative machinery of the country.

The narration is an excellent blend of self experience and an objective analysis of governance in India.

-- Dr Sudha Raman

Additions to the USI Library for the Quarter - Ending March 1997

(The books reviewed in October - December 1996 issue have been added to the Library during this quarter but not shown in this list)

Ser No.	*Author's Name*	*Title*	*Year*
		Air Force	
1.	Builder, Carl H.,	Organizing Training and Equipping the Air Force for Crises and Lesser Conflicts	1995
		Arms Transfer	
2.	Singh, Jasjit (*ed*),	Conventional Arms Transfers	1995
		Biography	
3.	Bose, Sisir K and Bose, Sugata (*eds*),	The Essential Writings of Netaji Subhas Chandra Bose	1997
4.	Palit, DK (Maj Gen),	Major General AA Rudra: His Service in Three Armies and Two World Wars	1997
		Defence	
5.	Jane's Defence Weekly,	World of Defence - 1995	1997
		Espionage	
6.	Parkash, Ved (Lt Col),	The Samba Spying Scandal : (Spies they were not)	1996
		Human-Rights	
7.	United States-Congress,	Country Reports of Human Rights Practices for 1996: Report Committee on International Relations - U.S. House of Representatives and the Committee of Foreign Relations - U.S. Senate	1996
		I.N.A.	
8.	Sareen, T.R.,	Japan and the Indian National Army	1996

generated more by the drug cartels than any national concerns, the only areas of attention could be the potential for conflict in Mexico, the fallout of the separatist movement in Quebec, and the imponderables in Cuba. All these are in the backyard of the USA, and can hence be considered dealt with by the USA without interference from any other quarter. I doubt whether the USA would allow any other agency to have anything to do with what happens in her backyard, for the foreseeable future.

One of the problems that Europe may have to face, without wishing to do so, is that of Islamic fundamentalism as prevailing in Algeria and terrorism from the Southern Rim. These may lead to refugee influx. Other than that, the scope for regional conflict arises from the tensions emerging from the ongoing confrontation between Turkey and Greece on the Cyprus and related issues, the proposed expansion of NATO and the Balkans imbroglio. Though the recent experience of their incompetence in dealing with the situation in the former Yugoslavia suggests that the European Union is not yet fully ready to handle security problems in Europe with any degree of confidence, it is more than likely that NATO will be the agency to be used, because the USA can then be drawn in, for better or for worse. There is a good deal of rhetoric about the West European Union (WEU), but whether it has any teeth or bite is a matter of speculation. Anyway, in so far as the rest of the world is concerned, the Europeans must deal with their problems themselves, as they are attempting to do in Albania. One cannot foresee the employment of NATO or WEU forces in areas outside Europe, in an interventionist manner, at this point in time, particularly because there is more than enough to keep them occupied within Europe; the potential for conflict between Greece and Turkey remains nascent; the Balkans - the Republics of the former Yugoslavia, with the Kosovo dimension, and Albania, - continue to retain the explosive content that engulfed the region in the early nineties, which means that substantial forces, no matter what nomenclature they are given (IFOR, SFOR, and so on), will need to be deployed for quite some time, if resurgence of conflict is to be avoided.

Sub-Saharan Africa will continue to remain a scene of con-

Iran or India is a matter of conjecture; primarily because, notwithstanding current moves, we are yet to be convinced that Russia will, in fact, come out of its present travails, as a vibrant and significant force that has the will to contend with the USA or just fall in line. In so far as countries like India and Iran are concerned, they may have their own reasons for not aligning with China, but may well consider it expedient or more viable, to form a power centre of their own, contesting both the USA and China, may be with Japan, or with others like the ASEAN group. Whether Europe will have the vision, or the courage, or the conviction, to form a power centre independent of the USA is, in my view, questionable; this may change, but at the moment, it appears that Europe will prefer to cling to the coat-tails of the USA (it gives them time to sort out their own internal contradictions). The Japanese role in all this is conditioned by their reluctance to assume a militaristic role; though one may be tempted to suggest it is more for reasons of expediency in terms of getting assured US support, without having to invest adequately for their security themselves. Ironically, what all this leads to, is that there may well be only one counter to the dominance of the USA - the Chinese; which may well mean the start of the Fourth World War, albeit a cold one.

Before proceeding with a detailed analysis of the international security environment, it is essential to flag some trans-national issues that will continue to have a serious influence on the security environment, notwithstanding what is attempted by nation states to prevent, or contain conflict; namely : proliferation of weapons of mass destruction (WMD), the spread of small arms (though this is often attempted to be glossed over by the countries that benefit from arms sales), terrorism, and international crime in the form of drug trafficking.

Let us now attempt to analyse briefly the environment region by region, to see what are the possible flashpoints that may generate tensions and conflict situations around the globe. Since the USA is the sole dominant power today, we may start with the Americas. In so far as North and South America are concerned, while there may be some minor conflicts of manageable nature,

		India-History	
9.	Taylor, P.J.O., *(ed)*,	A Companion to the 'Indian Mutiny' of 1857	1996
10.	Nanda, Ravi (Col).,	Preparing India for the Next Century	1997
		Indian Army	
11.	--	The Indian Army: United Nations Peace Keeping Operations	1997
12.	Rosen, Stephen Peter,	Societies and Military Powers: India and its Armies	1996
13.	Sharma, Gautam (Lt Col),	Nationalisation of the Indian Army 1885-1947	1996
		Indian-Ocean	
14.	Indira Gandhi Memorial Trust,	The Making of an Indian Ocean Community (Fifth Indira Gandhi Conference)	1996
		Gulf War-Lessons	
15.	Cordesman, Anthony H.,	The Lessons of Modern War-Vol IV: The Gulf War	1996
		Kashmir	
16.	Rahman, Mushtaqur,	Divided Kashmir: Old Problems, New Opportunities for India, Pakistan and the Kashmir People	1996
17.	Naqash, Nasir A.,	Kashmir: From Crisis to Crisis	1997
		Memoirs	
18.	Singh, Giani Zail,	Memoirs of Giani Zail Singh: The Seventh President of India	1997
		Nuclear Non-Proliferation	
19.	United Nations,	The United Nations and Nuclear Non-Proliferation	1995

		Nuclear Power	
20.	Gjelstad, Jorn and Njolstad, Olav (eds),	Nuclear Rivalry and International Order	1996
		Nuclear Test Ban Treaty - India	
21.	Pande, Savita (Dr.),	India and the Nuclear Test Ban	1996
		Reference Books	
22.	Far Eastern Economic Review,	Asia 1997: A Year Book, A Review of the Events of 1996	
23.	--	Manorama Year Book 1997: Thirty Second Year of Publication, 1997	
		Singapore Mutiny	
24.	Sareen, T.R.,	Secret Documents on Singapore Mutiny 1915	1995
		Somalia - Operations	
25.	Allard, Kenneth,	Somalia Operations Lessons Learned	1995
		South Asia	
26.	Rupesinghe, Kumar and Mumtaz Khawar *(eds)*,	Internal Conflicts in South Asia	1996
27.	Bhargava, Kishore Kant and others. *(eds)*,	Shaping South Asia's Future: Role of Regional Cooperation	1995
		Technology	
28.	Griffith, Paddy,	The Ultimate Weaponry	1995

available military technology has made warfare in the classic sense, too costly and, in fact, unwinnable, except where the asymmetry is too large. Even in the developing world, conventional war is not the preferred norm; low intensity irregular warfare has emerged as the preferred option. Some figures on the number of conflicts since the end of the Cold War may be indicative that the scale has not really diminished, and, equally importantly, that conflicts are tending to be increasingly within states. Between 1993 and 1995, 34 major armed conflicts were waged in 28 locations; of the 30 major armed conflicts fought in 1995, all 30 were intra-state or internal wars.

With that backdrop, let us take a quick look at the international scene on as broad a perspective as possible, before trying to delve into greater detail. The situation, whether one likes it or not, is that the United States of America is the dominant power; it totally monopolises the international arena, sets the agenda for what is to be done by international institutions and pursues its policies without any inhibitions whatsoever. There are a few squeaks every now and then, but not enough to challenge US dominance; the present situation will therefore continue for at least a couple of years. Given the resentment to total US dominance, particularly by Russia and China and possibly, in a muted manner, by some European countries like France, there appears to be a possibility that additional power centres that could challenge the current US domination may emerge, at some time in the future. Having stated this, however, it may be relevant to remind oneself that countries like China and Iran are not only vocal, but demonstrative in their behaviour, that they will not allow the USA to even remotely transgress their sovereignty. In another category, fall countries like Cuba, Iraq, Libya and Sudan.

Of one thing there can be no doubt; as and when she is ready and capable, or even before that in some ways, China will be at the core of the primary centre of power that will contest the dominance of the USA, given the large military she has, and the modernisation of which she is paying added attention to, as also her growing economic clout and potential for more. Whether she will be joined in this endeavour, by other countries like Russia,

International Security Environment

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

All of you are aware that many changes were effected on the international scene after the First World War. Similarly, a great many changes took place after the Second World War. But, to almost all of you that is history. However, you are now very much part of the profound transformation that is taking place in the international security environment after the termination of the Third World War – which is what the Cold War was, in many ways; though fought diplomatically, by proxy and through intelligence agencies. There can be no doubt that with the major powers engaged in an ideological conflict, the Cold War cast a shadow on international trends and developments. Multilateral institutions set up after the Second World War to help create a democratic and equitable world order, based on collective security, were often paralysed by the rivalry between the USA and the former USSR.

Determining the scope of an analysis of international security in the aftermath of the end of the Cold War is not an easy matter, primarily because though still largely concerned with the security of nation states, such analysis has to take account of the demolition of totalitarian structures and hence greater democratisation and a broadening of the canvas of what constitutes security. Besides the purely military aspect of territorial integrity, the concept now encompasses preservation of the political systems, economic and social well-being of the people, preservation of essential energy sources, protection of the environment and so on. Military theories are being revisited and possibly modified. Military conflicts between the most advanced states and major powers are considered unlikely because the

*Text of a talk delivered on 27 May 1997 by Lt Gen Satish Nambiar, PVSM, AVSM, VrC to foreign diplomats at the Foreign Service Institute, Chanakyapuri, New Delhi.

@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 USI.

Journal of the United Service Institution of India, Vol CXXVII, No. 528, April-June, 1997.

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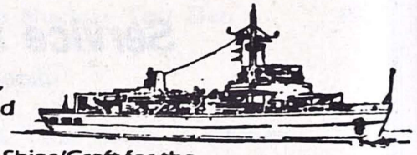

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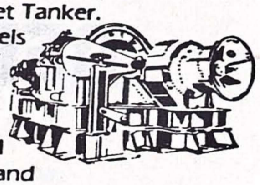

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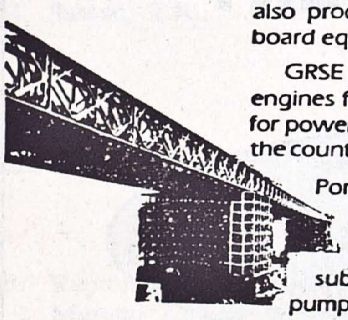

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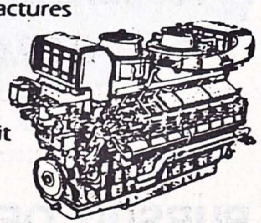

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EDITORIAL

The Challenges Ahead

As India observes and celebrates 50 years of Independence, she faces a diversity of international challenges and opportunities that are extremely complex. Throughout history, men have sought peace but suffered war; all too often, deliberate decisions or miscalculations have brought violence and destruction to a world yearning for tranquility. Indians have every reason to take pride in what their country has achieved during the last 50 years. However, there is a need to look ahead, try and peep into the future, and chalk out the course in the best national interest.

The lead article in this issue on "International Security Environement" by Lt Gen Satish Nambiar, is a perceptive and clear-sighted analysis in a holistic framework of the international arena. It needs careful reading and reflection to arrive at the heart of the problem and then to design, with the rigor of objectvity, concepts for creative policy in the region. The author does not foresee any large scale war in the immediate future. Some local conflicts may take place which are likely to be contained. The areas of concern will be west Asia, Africa and Taiwan. Of concern to developing countries will be trans-national issues - proliferation of small arms, terrorism and drug trafficking. National Strategy needs to be formulated for a credible response to the perceived threats.

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