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GUEST EDITORIAL

National Security Council

In the first week of May, the Prime Minister, Mr Narasimha Rao, stated in the Rajya Sabha that the government intended to set up the National Security Council (NSC). This is a measure long overdue and should be implemented as soon as possible.

There have been a number of misgivings on this issue due entirely to a lack of understanding of what it implies. It has been termed as an extra constitutional body by some and a super cabinet by others. Let everyone be assured that, in our cabinet system of government, the NSC would be a committee of the Cabinet presided over by the PM and with a number of ministers; Finance, Home, External Affairs, and Defence as permanent members, and others invited to sit on its deliberations on the basis of the subject under consideration. In addition, the Chiefs of Staff, heads of external and internal intelligence and other officials would be in attendance depending again on the subject matter.

The question that may be asked is that if the NSC is a committee of the Cabinet then what is all the fuss about. The concept of the NSC is a post Second World War phenomenon and is based on the holistic definition of security as opposed to the original one restricted to external threat. It includes, in addition, the internal threat and economic or environmental issues to name some. Such a holistic interpretation of security requires a coordinated and comprehensive consideration to formulate national security policy from which would flow, for instance, the foreign, defence, and economic policies. This cannot be done by any one ministry. There is no dearth of examples of misconceived actions in the past due to lack of an institutional framework for coordinated and comprehensive policy formulation; the instruction to the Army to "evict the Chinese from Thagla" in 1962 was one, and Operation Blue Star in 1984 was another.

Not only could the NSC ensure policy that transcends individual departments of the government, it could also prevent knee jerk reactions. This could be ensured by constituting a wholetime multifaceted National Security Staff (NSS); a think-tank which would regularly survey all aspects of the internal and international scene, foresee issues and problems, deliberate on these and outline policy options. Short papers could be put up to the NSC for decision and policy formulation.

The NSS should comprise of academics, analysts, diplomats, bureaucrats, the military and others. A beginning could be made by appointing 12 to

15, all serving officers in case of diplomats, bureaucrats and the military, with generally a minimum of 15 to 20 years experience in their speciality and with a broad multi-discipline outlook. Preferably, they should serve for the rest of their service with the NSS, if found suitable, so that their dedication is not diverted by "possibilities" within their parent departments. What is required is dedicated analysts with a commitment.

The departments of the government are too involved in the day to day issues and problems to have the time to survey, forecast and analyse matters that may crop up in the future. Besides, their approach cannot be holistic.

The link between the NSC and the NSS can best be provided by appointing a National Security Advisor (NSA) of the status of a minister. He should be an individual with marked interest in national security and strategic issues. It will be the NSA who will be the guiding spirit of the NSS and who will have the clout to ensure timely consideration of policy options by the NSC and issuance of directions for policy formulation. The implementation of policy by various departments will be coordinated by the Cabinet Secretary.

Lt General A M Vohra PVSM, IA (Retd)
Former Vice Chief of the Army Staff

Kashmir Problem : A Minefield of Mistrust

AIR CHIEF MARSHAL O P MEHRA PVSM (Retd)

I express your sentiments and mine when I state that Mr. Girish Saxena has dealt with a very intricate problem - Kashmir - very ably and in an extremely lucid manner. It is undoubtedly a very learned discourse.

In taking a pragmatic view we cannot lose sight of the following facts:

(a) We rightly claim that J & K is an integral part of India. Pakistan keeps on stressing that the signing of the Instrument of Accession was a fraud and that keeping in view the ethnic character of the Valley and POK, as also the principle of contiguity, it should be part of Pakistan.

(b) Mr. Saxena has correctly stated - Kashmir has since 1950 had what may be called a special place in our Constitution and that status amounts to their having a Constitution.

(c) The Kashmir issue has been debated at national and international forums since 1948.

(d) Pakistan has repeatedly but unsuccessfully resorted to war as a means to obtain its objective.

Keeping the above facts in view I ask : Is the Kashmir problem a vitally important issue for India and India's polity or not - particularly because the challenge of militancy has not been fully met? My categorical answer is in the affirmative. That being the case, the first and foremost prerequisite is the evolution of a National Policy concerning the subject. Such a policy, I suggest, should be evolved through a consensus amongst the nation's leadership representing various view points, ideologies and manifestos. As implementation of such a policy would require political solutions, the need for consensus is unavoidable.

Would it be incorrect to assess the importance which the political leadership seems to attach to the Kashmir problem from the fact that not once has any of the last four Prime Ministers of India - Rajiv Gandhi, V.P. Singh,

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Text of the Closing Address by Air Chief Marshal O. P. Mehra PVSM, former Chief of the Air Staff and former Governor Bombay and Rajasthan, at the end of the talk on Kashmir delivered by Shri G. C. Saxena on May 11, 1994. The text of Shri Saxena's talk was published in the April-June 1994 issue of the USI Journal.

Chandra Shekhar and P.V. Narasimha Rao - deemed it prudent and proper to visit Kashmir? The Prime Ministers of Pakistan, on the other hand, have frequently visited POK and have made strong statements espousing the cause of the Kashmiris and helping militancy in every way. We must ask ourselves, what impression can such a situation have on the Kashmiris particularly those in the Valley? Can we blame them for feeling that the leadership of India has forsaken them, or are not concerned with their problems?

The plight of the migrants, both Hindu and Muslim, particularly the former, is an issue which seems to suffer from neglect. I am told Palestinians and Afghans who have sought asylum in India receive monthly assistance ranging from Rs 2000/- to Rs 2500/- whereas the Kashmiri migrants receive Rs 800/- per month if residing in Jammu and Rs 1000/- (likely to be raised to Rs 1500/-) if residing in Delhi or vice versa. The impact of such treatment on those adversely affected and who have the interests of India and Kashmir at heart can best be imagined.

We are all aware that the top brass in the Ministry of Home Affairs - the Home Minister, the Minister of State in the Home Ministry, Home Secretary and Secretary i/c Kashmir Affairs, are not on the same wave length. In such an environment can a key and nodal Ministry help the cause and can those people whose problems the Ministry is expected to handle, have confidence in their ability to take right decisions ?

There is an inescapable need to resuscitate an inter-ministerial advisory body which would not only be the "think tank" of the Government but would implement the policies as finally enunciated by the political leadership, once again based on a national consensus. Such a measure would hopefully also eliminate the chances of concerned individuals not being on the same wave length.

Mr. Saxena's talk brings out the fact that the security situation is improving; however, sustained pressure must be maintained. The morale of the Police and the bureaucracy in J & K is at a low ebb. As in the case of Punjab, before we begin tackling the problems of Kashmir, we should ensure that the morale of the Police and bureaucracy is raised. Select the functionaries carefully. This can best be done by our reposing confidence in their ability and integrity to proudly stand by their commitments to the cause and the country. In Punjab this has been amply achieved. Once this happens they would be better placed to deal with the problems than some of the Security Forces especially the Para Military Forces.

It is obvious that terrorism in Kashmir is a big business for the vast cross section of political leadership - former and current - the emerging militant

leadership, the fundamentalists, the security forces, the bureaucracy and the foreign hand. A very sad commentary indeed which cries for a speedy solution.

Reading through newspapers from time to time one gathers the impression that we are not serious about solving the Kashmir problem and that we are allowing the issues to drift. Surely, if we are serious we should work to some time-frame; if for no other reason, for the guidance of those who are entrusted with the task of bringing about a peaceful solution of the problem. Equally important is to evolve a nationally acceptable plan of action based on an agreed policy governing J & K problems and work relentlessly towards achieving results.

There are some people who advocate that Article 370 of the Constitution should be abrogated. I would like to ask what purpose would be served if the Central Government were to do so now. As Mr. Saxena has suggested that elections are essential for normalisation, would it not be better to first establish an elected Government in J & K and get them to sponsor such a move? The latter would find ready acceptance at the hands of the Kashmiris and the world at large. I do hope such a course would be resorted to if it is deemed in the overall interests of all concerned.

No one can oppose use of force where it is necessary but I feel that if we do not want the Kashmiris to be further alienated, then we should display compassion in dealing with the problems of Kashmiris irrespective of whether they are Hindus or Muslims. In pursuit of such a goal we should make certain that minorities who have left their hearth and homes in Kashmir are moved back with dignity and honour in the shortest possible time.

Our political philosophy is to *react*. By doing so we hand over the initiative to the others and are forever on the defensive and hence at a disadvantage. Our experience during skirmishes with Pakistan bears testimony to this. It is time we learnt to keep the initiative with us. It calls for being *Action rather than Reaction oriented.* We have the intellect and ability to foresee events and formulate policies which should place us at an advantage. Political will to change the philosophy is the need of the hour. As a part of this change of philosophy, I suggest that we refer to India's Army, Navy and the Air Force as the Armed Forces of India and not as the Defence Services - a psychological ploy.

Finally, my considered view is that the problems in Kashmir cannot be solved by humiliating the leadership, sane, militant, misguided - that is in existence and which may be in a position to contribute to a solution of the problems that stare us in the face. Issues like the release of political detenues

from the Supreme Court and then immediate re-arrest - Lone and Gilani - and the continued detention of others, cannot contribute to making matters easy. It is very widely known that the *Hurriyat* leaders are willing to talk. That being the case, should we hesitate or encourage them to come to the negotiating table directly or through intermediaries in an attempt to mellow them down. Let us not forget that the problems in Nagaland and Mizoram, though admittedly not of the same magnitude were solved through negotiations with the "*devils themselves*" and not by ignoring them. History, if taken seriously, is a great teacher.

I am in agreement that a neutral position has to be found to facilitate political issues. Rigidity would not pay. However, during negotiations we must ensure that vital national interests are not compromised.

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The Face behind the Mask behind the Veil- Pakistan's Inter Services Intelligence

LT GEN VIJAY MADAN, PVSM, VSM (RETD)

INTRODUCTION

The President of Pakistan, Field Marshal Ayub Khan, came to the conclusion that Nawabzada Nasrullah Khan, who had been drumming up political opposition to the President had become dangerous. He therefore, directed the Inter Services Intelligence (ISI) to have the Nawabzada assassinated. Major General Riaz Hussain, the Director General (DG) of the ISI was personally instructed by the Field Marshal to have the task carried out, but the ISI could discover no such enemies of the Nawabzada who could be implicated in the crime. The finger of suspicion would have clearly pointed at the Presidential Palace, the project was therefore, abandoned. Many years later, scores of East Pakistanis whose names had been placed on the ISI's hit lists were to be less fortunate than the Nawabzada and were murdered. In 1965 when, on the other hand, Ayub Khan had occasion to chide the ISI for its failure to provide appropriate intelligence anticipating Indian reactions, more so the whereabouts of India's only armoured division, the DG retorted that since the ISI was kept busy keeping tabs on Ayub Khan's political opponents at home the failure was not surprising.

After the entry of the Soviet Union into Afghanistan the Pakistani foreign minister Mr Agha Shahi visited Washington for discussions with his American counter-part, Mr Cyrus Vance. During a recess in the talks, Mr. Vance took Mr Shahi aside and asked him rather casually whether the Afghan Mujahideen had started receiving the shipment of arms which their two countries had agreed upon. The Pakistani Foreign Minister could barely hide his surprise at this revelation. He did not have a clue of the deal struck between the United States, through its CIA, and the ISI, representing Pakistan Army, the most powerful element of Pakistans' triad of power-holders. The other two, i.e. the bureaucracy and the politicians were nowhere in the picture about the Afghan policy being chalked out and executed by President Zia, who also had the unique distinction of simultaneously being the Army Chief of the country. And the Army of that country neither did then, nor does it now trust the other two members of the triad with matters concerning national security. Since national security is completely enmeshed with foreign policy, even that latter field is,

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by and large, out of bounds to these two unfortunate camp followers. To give another example; in 1952 when the first Pakistani Military Attache to Washington was appointed, he was charged by the then Commander-in-Chief, General Ayub Khan and the Defence Secretary, Major General Iskandar Mirza, to obtain arms from the United States but not to take the Ambassador into confidence since the politicians could not be trusted with sensitive matters of national security. Such distrust, which has been the foundation of Pakistan Army's relationship with the country's civilian establishment, both political and bureaucratic, has in turn fashioned the role that the ISI has come to play in Pakistan's internal and external affairs on behalf of the Army.

Over the past decade or so, specially ever since troubles in the Indian Punjab broke out, the ISI has held the attention of the Indian public. Hardly a day passes when newspapers don't scream about this or that sinister plot hatched against India by the ISI. The diabolical machinations of the ISI from Kashmir to Kanyakumari and from the North-East to Bombay, have all been documented and broadcast. The ISI, however, has assumed its present "bogeyman" status as much due to its own abilities, as due to the omissions and commissions of the Indians themselves. In the context of the latter observation one essential point needs to be borne in mind. In intelligence related operations, and here the term intelligence is used in its widest possible politico-military sense, success is directly proportional to the opponent's failure in undertaking effective counter measures. This may appear to be stating the obvious, but its importance has to be fully understood so as to appreciate the ISI's successes against India so far.

The Organisation and the Role of the ISI

The intelligence organisations that India and Pakistan inherited from the British were largely orientated against the nationalist and other anti-British elements within the Indian Empire. For such an activity the best organisation is the police and consequently therefore, the British element of the Indian Police provided the frame-work for British-Indian intelligence agencies. It was further re-inforced by agents and informers of Residents located in native princely states. These agencies came directly under the Political Department of the Government of India. This department also operated an intelligence network, along the Indian Empire's frontiers, more so the North Western Frontier, based on British Political Agents operating through local levies to ensure surveillance of the frontier tribes. The British Indian Army's intelligence efforts too were largely directed against internal subversive elements and various political parties. Consequently, a high degree of close cooperation developed between the Indian Army and the Indian Police in matters regarding internal and external intelligence. A cooperation which was encouraged, in fact insisted upon, by the administration.

After independence and partition those who took on the role of the administrators and policy makers in both India and Pakistan unfortunately were not by and large experienced in matters such as these; nor did the police, the civil servants and the armed forces belong to the same establishment, as happens in most other countries. There was therefore, an absence of informal cooperation too.

The domination of the intelligence organisations by the police continued after the partition both in India and Pakistan. But whereas in India this system continues, in Pakistan a major change took place after the termination of hostilities in J&K in January 1949. It appears that as a result of what was felt as intelligence failures during the J&K operations, the police dominated intelligence organisations were declared unsuitable for the defence of Pakistan. Consequently, the ISI came into existence. It was'nt as if the Police gave up their powers easily. In the early fifties the first Pakistani Prime Minister, Mr Liaquat Ali Khan backed the Intelligence Bureau in preference to the ISI, because of his greater trust in the Police, who were prepared to do the bidding of the politicians. In return for this confidence the police officers provided complete surveillance of Mr. Liaquat Ali Khan's political opponents, not the least amongsts them being Miss Fatima Jinnah, sister of the late Qaid-e-Azam.

That Pakistan was greatly helped in the setting-up its intelligence organisation by the British officers who continued to serve in large numbers in the Pakistani armed forces is quite possible. That it depended to a very great extent on the War Office in London for intelligence on its target countries is more than probable, given that the sympathies of the British establishment, particularly the military were with Pakistan. Even so the arrangement must have been most unsatisfactory.

The Directorate General of Inter-Services Intelligence as established in 1949, has over the years grown into an all embracing intelligence organisation, perhaps amongst the better ones in the world. There is no aspect of intelligence or intelligence related matters which is outside its purview. The spectrum of its activities ranges from the gathering of both external and internal intelligence, counter-intelligence, covert activities within and outside Pakistan and last, though not the least, to keep the politicians of Pakistan under surveillance and check.

The first major reorganisation of the ISI came about after the 1965 Indo-Pak conflict. It was once more reorganised on the collapse of the Ayub regime and the start of troubles in the former East Pakistan. It was further re-inforced and expanded after the entry of the Soviets into Afghanistan and the decision of Pakistan to become a front-line state in this struggle. Besides, the ISI's links

with the CIA were immensely strengthened from then onwards. The ISI also studied and borrowed techniques from the Israeli Secret Service, the MOSSAD; the Shah of Iran's secret Service, the SAVAK and not the least, from the British Intelligence Services. All these agencies had close links with the CIA.

The ISI is headed by a Director General (DG) of the rank of Lt Gen/Maj Gen. Normally it has been a serving officer. Oddly enough, although he heads an inter-services organisation, no one from the Pakistan Navy (PN) or the Pakistan Air Force (PAF) has ever headed the ISI. The ISI coordinates the functioning of the intelligence directorates of the armed forces, and is the whole and sole organisation for collection and dissemination of military and external intelligence. The DG, although under the Ministry of Defence, is at the same time the adviser to the Prime Minister on intelligence matters. That of course is for public consumption. The DG is the Army Chief's man and no one else's. The President or the Prime Minister can send for him but he tells them what the Army Chief wants them to know.

The ISI is roughly, structured as follows:-

(a) *The Joint Intelligence Bureau (Jt IB).* This bureau is the largest bureau of the ISI. It has three sections/sub-sections including one dealing with India and the Far East. Presumably, India and China are now dealt with by a separate sub-section each. The other section deals with the former communist coutnries. Although they are no more a monolithic communist bloc, they continue to be dealt with as a bloc, except perhaps for the Central Asian republics of the former Soviet Union, who could have been combined now with Afghanistan in a common section. The Jt IB is also responsible for postings and working of Pakistani Defence Attaches/Advisers to foreign countries. Incidentally, Defence Attaches exchanged between countries belonging to the Commonwealth are traditionally known as advisers and not attaches. The movement of foreign defence attaches within Pakistan is also controlled by the Jt IB.

(b) *The Joint Counter-Intelligence Bureau (Jt CIB).* This Bureau is responsible for surveillance of foreign suspects and, interestingly enough, of Pakistani political leaders. As a part of this activity the Jt CIB is also charged with collecting all political intelligence within Pakistan and advising the Prime Minister about such activity through the DG ISI. The fact that the Prime Minister and his/her colleagues would have at one time or another themselves been targets of such intelligence collection must be galling to these worthies. In fact, they remain objects of the ISI's attentions even while in office. This holds true for civil servants and police officers also. Although such use or misuse of intelligence services

is not unknown in other countries, in Pakistan, however, these legitimate or illegitimate activities of the ISI are carried out on behalf of the Pakistan Army and Pakistan Army alone, not at the behest of the government of the day. The Jt CIB through the Inter Services Security Section keeps even the personnel of the armed forces irrespective of their ranks under surveillance. The last C-in-C of the Pakistan Army, Lt Gen Gul Hassan found this out to his dismay when he was the Director of Military Operations. Such surveillance takes place in other countries too but in Pakistan, however, it is as much a part of counter-intelligence (a very legitimate activity) as to keep tabs on future pretenders to the throne. Similarly, the personnel of the ISI itself are kept under constant watch.

(c) *Joint Intelligence-Miscellaneous (Jt IM).* Perhaps the most pernicious of the ISI's bureaus, it is responsible for espionage activities in other countries. The Jt IM does so either through agents controlled by the ISI headquarters itself or through its officers posted in cover appointments in Pakstani missions abroad. Their task is to set up espionage networks within the host countries. Trained spies are also sent for carrying out what are called offensive intelligence assignments. Members of the Jt IM are known to have crossed international borders periodically to meet their agents. Normally, most activities at and across the borders are controlled by Field Intelligence Units (FIU). These FIU's work under the Jt IM and are headed by officers of the ranks of a Major or a Lieutenant Colonel.

(d) *Joint Intelligence North (Jt IN).* An interesting bureau, exclusively responsible for gathering intelligence of Jammu & Kashmir (J&K). Presumably together with Jt IM it is the nodal point for all ISI activities in J&K.

(e) *Joint Signals Intelligence Bureau (Jt Sig IB).* As would be obvious, the task of this bureau is to gather intelligence by monitoring the electronic communication links of target countries. The bureau also produces codes for the use of the various services over their radio net-works.

(f) *Joint Intelligence Technical (Jt IT).* This bureau works in close conjunction with the other bureaus specially the Jt Sig IB. It advises on the technical aspects of counter-intelligence, and makes recommendation about various equipment planned to be inducted into the ISI for intelligence and counter-intelligence purposes.

(g) *Joint Intelligence Administration (Jt IA).* This bureau is organised for administrative, i.e. internal house-keeping purposes. It also looks after the administration of personnel posted abroad, including defence advisers and attaches.

From a mere study of its organisation the structure of the ISI does not appear to be any different from most similar organisations anywhere in the world. It certainly is more pervasive and powerful than many others. As a comparison with Indian intelligence organisations, the ISI is a combination of the Research and Analysis Wing (R&AW), the Intelligence Bureau (IB), the Special Intelligence Bureau (SIB), the Central Bureau of Investigation (CBI), the various special agencies operating under the Indian Home Ministry, the intelligence directorates of the armed forces and para-military forces and the Joint Intelligence Committee, all rolled into one and more. The ISI collects, collates and converts information into intelligence. It analyses the long and the short term implications of threats arising from both with-in and outside Pakistan to the country's security. It disseminates this intelligence and its assessments and recommendations. The ISI also controls covert forces raised by itself or made available to it for covert purposes, like the Army's Special Services Group (SSG). It keeps in contact with or controls, guides and directs client groups in target countries to create trouble. Its connections with various insurgent groups in J&K and the North-East are examples of such close liaison and control. Finally, the ISI makes policy on all security matters as an organ of the Army, and not so much as an organ of the state.

THE ISI AND PAKISTAN'S POLITICIANS

As the dictum goes, information is power, and it is information that the DG ISI provides to the Army Chief which adds to the immense power that the latter wields within the Pakistani State. Consequently, the DG ISI while being a creature of the Army Chief is at the same time one of his main crutches. Zulfikar Ali Bhutto tried to manipulate the arrangement by being clever by half. Taking advantage of the general public disgust with the Army's defeat in the Bangladesh War he, rather dramatically, removed the new army Chief Lt Gen Gul Hassan and his counter-part in the PAF, Air Marshal Rahim Khan. Although he made it out that they fancied themselves as king-makers, in fact he was aware that they had his measure and were aware of his shallow character. He also changed the designations of the three heads of armed forces from Commanders-in-Chief, to Chiefs of Staff of the respective services. Finally, in what must have appeared to him as a stroke of genius, he created the appointment of a Chairman Chiefs of Staff but, a toothless job at that. In so far as the DG of the ISI was concerned, Bhutto tried to downgrade him and his organisation by giving importance to the intelligence wing of the newly created Federal Security Force (FSF), Bhutto's brainchild, created in the fond hope that perhaps one day a force loyal to him would balance the Army. The DG FSF, Mahsud Mahmood, the National Security adviser Maj Gen (retd) Akbar Khan, and Bhutto's Chief Security Officer, Saeed Ahmad Khan became the props on whom Bhutto leaned for information about his actual and

presumed enemies. The ISI retaliated by updating the dossier on Bhutto's activities, many of which to say the least were horrible. This dossier came in handy when Bhutto was sentenced to death in discrediting him with the public at large. Apart from the fact that Bhutto had failed to create a grass-roots party which could have mobilised public opinion in his favour, the publishing of the dark and sinister side of Bhutto's personality to a great extent prevented any sympathy for him from going out of control. The dark side of Bhutto's character can be appreciated from just one incident. A close political colleague of his and the co-founder of the Pakistan Peoples Party, Mr J.A. Rahim, was invited to dinner at the Prime Minister's residence. The host, Mr Bhutto, kept his guests waiting for two hours, while he remained locked-up upstairs for no apparent reason. Mr Rahim felt slighted and decided to leave. The Prime Minister, taking this to be an affront to his feudal outlook ordered Mahsud Mahmood and his FSF to show Rahim his place. Mr Rahim along with his son were woken up that night, dragged downstairs and beaten up by the FSF goons. Mr Rahim suffered multiple fractures and had to be hospitalized. Bhutto's FSF committed innumerable atrocities on his opponents in Kot Lakhpat and the Attock Fort, humiliating them and even their ladies. The ISI documented all this. General Zia, who himself had been often humiliated by Bhutto, had these activities broadcast over the national media. One of his first acts after taking over power was to disband and disperse the least lamented FSF. With that any pretensions of challenging the Army or the ISI, even in the very narrow but important field of internal intelligence came to an end.

During Gen Zia's time the ISI really came into its own. This was not only due to the dependence of the Martial Law rulers on it for all internal intelligence but also its complete involvement in the Afghan episode. Its DG, Gen Akhtar Abdur Rehman became a major participant in policy-making and Zia had implicit faith in him. In 1987, when differences arose between another Zia loyalist, General K.M. Arif the Vice Chief of the Army and the DG ISI, Zia sided with the latter and retired Arif. Gen Akhtar too was possibly sidelined subsequently in so far as the Afghan operations were concerned since he appeared to have become an irritant to the Americans by giving preference to the Islamic fundamentalist cause in Afghanistan over the American aim of getting the Russians humiliated and out of Afghanistan. Of course, Gen Akhtar was pushing Zia's policy but perhaps with too much gusto and at an inappropriate time.

When Ms Bhutto assumed office in 1988 after the Americans brokered the deal between the Army and her, she brought with her bitter memories of her father's end and the ISI's role in it. An end, she believed he may have avoided had the ISI reported to him in his capacity as the Prime Minister which, by their charter, they were mandated to do. That could have only

happened if the ISI was headed by a man of the Prime Minister. She, therefore, asked that the then DG ISI, Lt Gen Hamid Gul be replaced so that her man could be inducted in. The Army Chief, Gen Aslam Beg, was initially disinclined to go along with the Prime Minister but subsequently agreed to the change since at that particular moment embarassing the Prime Minister, who had the complete backing of the Americans, would have been inopportune. So Ms. Bhutto brought in a rather colourless retired officer, Lt Gen Kalue, to head the ISI but with disastrous results. She may have had DG ISI in her pocket but Kalue did not have the ISI in his. He was never accepted by the Army and Ms. Bhutto had to concede later that replacing Hamid Gul was her most significant mistake. Hamid Gul, besides being a brilliant person, was yet not Gen Beg's man. Perhaps he could have been a useful ally in the confrontation that was brewing up between the President and Ms. Bhutto with the Army Chief ganging up with the former. At least Ms. Bhutto believed so, although it is doubtful if Gen Hamid Gul or for the matter any other general heading the ISI would have stood up against Chief, which meant the Army. Anyway, a pathetic Ms. Bhutto had to ring-up the American Ambassador to find out the outcome of her confrontation with President Ghulam Ishaq Khan. Poor Gen Kalue was unable to give her any information in time that she was to be booted out. The Army had not finished with her. Soon the ISI was shopping around for a rival to be put-up against her and found a perfectly willing Mr. Nawaz Sharif, who presumably met their requirements.

The grief which both Mr. Nawaz Sharif and President Ghulam Ishaq Khan came to as a result of the decision given by that final referee of Pakistani Political power, the Army in the person of the Army Chief, is too recent an event to need re-counting. There is some hope growing in a few Pakistani breasts and perhaps a few Indian ones too, that once the present Pakistani Army Chief retires the next one will be a Bhutto man. Then, with both the President and the Army Chief being her's the power equations in Pakistan will change, with, Ms Bhutto emerging as the supreme unchallenged leader of Pakistan, or at least with her position tending to some such happy scheme of things. May be, but most likely not. The Army Chief draws his power from his constituency the Army. Any decision of Ms. Bhutto's Government which, jeopardises or compromises the interests of this constituency, including matters affecting national security, which, as has been repeatedly stressed so far, the Army considers to be its personal domain, will draw the Army's ire. In such an event, Ms. Bhutto and her well wishers, whether in Pakistan or in India or even in the USA can start counting her days. The Army would then once more declare open season against Pakistani politicians and the ISI will lead the pack to hunt them. The USA has always been aware of such possibilities and has, therefore, consistently kept its links with the Army open, irrespective of which political party or personality adorns the front office of the Pakistani Government.

AFGHANISTAN, INDIA AND THE ISI

Ever since its creation the Pakistani ruling establishment has been paranoid about being encircled by two inimical countries, so identified by them, viz. Afghanistan and India. Greatly encouraged by the departing British in this regard, the Pakistanis were reinforced in their fears because of a hostile Afghanistan refusing to recognise the Durand Line as anything more than an illegitimate inheritance of Pakistan bequethed by the departing British Indian Empire. Besides, the frontier tribes, in spite of their brief diversion into Kashmir in 47-48, were no-body's bonds-men, least of all that of the Pakistani elite. Their loyalties were always doubtful. And finally, the North Western Frontier Province (NWFP) itself had cast its lot with Pakistan, almost at the last moment through a referendum conducted by the British to find out if the NWFP wanted to join India or Pakistan. Till the very eve of this referendum, the NWFP had been ruled by an elected Congress government under Dr. Khan Sahib, whose brother Khan Abdul Ghaffar Khan and his "Khudai Khidmatgars" and the Congress had undoubtedly established a large following amongst the Pathans.

The referendum was boycotted by the Congress and neatly managed by the British Governor of the NWFP in favour of Pakistan. He was suitably assisted by Khan Abdul Qayum Khan, who abandoned the Congress at the last minute and joined the Muslim League. These powers and personalities when combined with the slogan of "Islam in danger", proved too powerful a mixture for any Congress hopes, except perhaps for one possible trump-card the Congress could have played; that of offering an independent Pakhtoonistan to the Pathans in case they cast their lot with India. This may have ended Pakistani dreams in the NWFP. Of course, all this is said in hind-sight and is probably unfair to the then Indian policy makers, as it is equally unfair to credit them with such far sighted strategic vision as far as national security is concerned. The British were obviously quite aware of the dangers that could arise for Pakistan in case a nexus were to ever form between a disgruntled Pathan population, a hostile Afghanistan and a powerful, unfriendly India, all geographically contiguous to each other. Having lost the NWFP, India could still have achieved such a contiguity by securing the Western areas of J&K from Pakistan. Here-in again the Indians displayed their utter lack of strategic sense when, reportedly at the direct behest of Prime Minister Mr. Nehru, they switched the direction of their advance in the autumn of 1947 from the Uri-Domel-Muzzafarabad/Kohala axis, towards Punch in order to help the refugees there. In the event nothing was achieved, certainly not the geographical contiguity with some portions of the NWFP.

In the summer of 1948 when the Indian army resumed operations

towards Domel/Muzafarabad, the Pakistani fears were once more aroused. The British C-in-C of the Pakistan Army, General Sir Douglas Gracey, while recommending the entry of Pakistani regular troops in force into J&K, warned that: "if India is not to be allowed to sit at the doorstep of Pakistan to the rear and on the flank, at liberty to enter at her will and pleasure....., and if subversive forces are not to be let loose within Pakistan itself, it is imperative that the Indian Army is not allowed to advance beyond the general line Uri-Poonch-Naushera". The disaster that Pakistan feared for itself in a situation in which the forces of Afghanistan, the Pathans seeking Pakhtoonistan, and an inimical powerful India joined together like a conjunction of malevolent planets in its horoscope, can well be appreciated. Perhaps what is happening to India in Kashmir today may have happened to Pakistan much earlier in the NWFP and perhaps again, Pakhtoonistan may have taken birth much earlier then Bangladesh. Pakistan's ISI naturally targeted Afghanistan and India as its primary external concerns. Both the countries offered reasonably soft targets, not the least being the availability of large segments of population sympathetic to the Islamic facade of Pakistan if not to Pakistan itself. Commonality of language, rather poor counter-intelligence systems, porous borders and the presence of groups with demands of greater autonomy if not out-right secession in both the countries provided and continue to provide excellent fertile areas for ISI's activities.

AFGHANISTAN

It had been the fond hope of every Pakistani ruler to so manipulate the political situation in Afghanistan that eventually Afghanistan instead of being hostile would end up providing the so called "strategic depth" to Pakistan against India. Whether it implied the closest possible military cooperation between Pakistan and Afghanistan or, in the ultimate, a political confederation between the two, has never been clearly articulated nor was its presumed impact on India ever spelt out. To expect that India would be over-awed by the combined land-mass and populations of the two countries was as ludicrous, as to believe that the Afghans, whatever their ethnicity and beliefs, would prefer to become appendages of Pakistan. Nevertheless, the ISI's efforts in Aghanistan were well conducted, whether against the government of King Zahir Shah or later on that of President Daoud. The ISI was able to keep a close watch on whatever Afghan plans were worked out against Pakistan, specially in the frontier areas, for creating disaffection against Pakistan amongst the Pathan tribes. The Pakistan Army had to come in often to help the local levies to maintain control of these areas. Subsequently, when Khan Abdul Gaffar Khan was released from Pakistani prisons and decided to seek self-exile in Afghanistan, in Jalalabad, Pakistan's worries increased, but all in all the situation was well managed. In this context it may also be remembered that

the ISI did excellent work in providing intelligence back-up to the Army's counter-insurgency operations in Baluchistan.

With the entry of the Soviet Union into Afghanistan in Dec 79, to shore-up the Communist regime in Kabul, the entire complexion of Afghanistan-Pakistan relationship changed. It goes to the credit of the Pakistani President, General Mohammed Zia-Ul-Haq and his military junta, that they siezed the opportunity offered. Having sorted out with the Americans the terms and conditions of Pakistani investment in Afghanistan, they went full speed ahead with their plans for the country. The entire operation was funded by the USA and Saudi Arabia, each contributing almost equal amounts. The arms and ammunition, at least the more sophisticated ones, were purchased from the Americans. The Chinese as well as East European arms markets, where the dollar was mightier than Communism, were suitably utilized at the same time. The Afghans, of course, provided the cannon fodder, while the ISI was the whole and sole agent of the Pakistan Army in the war. It provided training to the Afghans, distributed arms and other aid to them, planned their operations and even sent ISI teams to accompany the Mujaheedin into Afghanistan. At times Pakistani troops provided artillery and other support, as in the Jallalabad battle but under the control of the ISI. The CIA developed very close relations with the ISI and it is inconceivable that the CIA, and thus the American Government, was un-aware of the diversion of large quantities of arms and ammunition, including Stinger missiles towards the Pakistan Army and Kashmiri militants, who were then being surreptiously prepared for their tasks. Be that as it may, the results in Afghanistan were a feather in the ISI's cap and have certainly added to its confidence and cockiness against India.

ISI's attempts at gaining a specific political advantage for Pakistan in Afghanistan have, however, not been as successful so far. Having tried out all varieties of leaders who could finally help make Afghanistan a partner of Pakistan, more so against India, the ISI finally selected Mr. Gulbuddin Hikmatyar to storm into Kabul on the back of Islamic fundamentalism, a mount provided by the late President Zia and his ISI. The going so far has not been all that smooth. The other factions in Afghanistan, like those of President Rabbani, General Dostum and even Ahmed Shah Mahsud and others would be loath to have a Koran wielding Pakistani stooge over-aweing them into submission. In the meantime, the Americans too appear to have distanced themselves from Pakistani attempts to promote Islamic fundamentalism in Afghanistan and later on into the Central Asian republics of the former Soviet Union. In this regard having won the conflict against the Communists and the former Soviet Union, the Americans are in no mood to hand over their victory to Pakistani Islamic fundamentalists. It is also doubtful wether Ms. Bhutto's present regime itself would be keen to have a fundamentalist dictatorship sitting in Kabul. Herein

lie the seeds of major future differences between Ms. Bhutto and the Army. It should not be forgotten that the Afghan policy was formulated by President Zia and the Reagan administration with "Islam in danger", as its plank. The problem of who would replace the Communists in Kabul was obviously not well thought out. This problem has to be now fully addressed and the Pakistan Army's candidate, Mr Hikmatyar continues to push his luck with aid and encouragement from the ISI. His opponents are obviously not without similar aid from their backers, so the end game has yet to be played.

Another aspect of ISI's activities worth mentioning is the manner it neutralized the threat of a Soviet/Afghan backed insurrection in Baluchistan which was expected to be launched in retaliation to Pakistan's support to the Afghan mujaheedin. In the late 1980's there were a number of reports of large "Lashkars" concentrating on the Afghan-Baluch borders to enter Baluchistan. Some of these reports were obviously wishful thinking and highly exaggerated. The local groups which were gathered and organised for troubling Pakistan were easily infiltrated by the ISI agents and the hopeful insurrectionists dealt with appropriately.

INDIA

Pakistani concern's about India are too well known to bear re-telling. It is no surprise that India has been the prime target of ISI's external activities. What is surprising, however, is the sudden discovery as it were, of this Ogre by all and sundry in India. Ranging from the high and mighty of this land to the lowest minion of the Government, all seek to hang their failures on the convenient peg of the ISI. And let us fact facts, ISI's successes against India have been a direct consequence of the failure of Indian agencies charged with protecting India's security interests. This is not the place nor the appropriate time to discuss these failures; some of them are already known and others will come to light in course of time.

While the ISI was still establishing its networks, the police dominated IB in Pakistan, which had already started its activities in India, set about forming cells inside India, mostly near military stations, and even planning assassinations of some Indian public figures. These were fairly amatuerish affairs, most of which were broken by Indian intelligence agencies. An attempt to subvert the loyalties of large sections of Indian muslims also met with very limited success. Amazingly enough, even in J&K, where the ground appeared to be quite fertile, nothing dramatic was achieved. With the entry of the ISI, however, more substantial results started coming in. It appears that the ISI came to the conclusion that using segments of the Indian muslim population to cultivate agents and establish net-works would not be as lucrative as subverting

the loyalties of such elements who would arouse the least suspicion. Monetary rewards, sex and other substantial attractions were offered and certainly bore fruit. An area of opportunity occurred in the North Eastern region when the Naga insurgency broke out in the Naga Hills and Tuensang Agency (now Nagaland). It took some time for Pakistan to realise the possibilities that had opened up for them against India. Having initially established contact with Pizo, Pakistanis started extending material support to the Naga insurgents by 1959-60-61. Arms and training were offered in the erstwhile East Pakistan. Some instructors were also perhaps infiltrated into the Naga Hills for the purpose. It was the general belief then that the information about Pakistani abetment was gained mostly by local Indian Army sources and not provided by any intelligence agency. Consequently, apart from the Army, the others, including perhaps the Government, were not particularly interested in believing these reports. In due course the responsibility for providing aid and sanctuary to the Naga hostiles passed on to the Chinese. Later with the insurgency in Mizoram erupting another opportunity came the ISI's way and it grasped it with both hands. With the emergence of Bangladesh and the end of Mizo insurgency things appeared to have been brought under control by India, but events starting with the emergence of the ULFA in Assam and subsequent other troubles in the North Eastern region show that the ISI is back in business with a vengeance. Using its old contacts in Bangladesh and reportedly with full cooperation from that country's intelligence services, the ISI has activated all its networks and established links with every insurgent group. The ISI is also using Nepal for opening up new areas in Eastern India to exfiltrate and infiltrate agents and material.

While Punjab provides an example of how an all out onslaught against Pakistani designs has frustrated Pakistan plans, Kashmir shows the failure of every organ of the Indian Government to rise to the occasion, greatly helping the ISI in trying to achieve what is eventually the be-all and end-all of Pakistan's dreams, the annexation of the Indian portion of the State of J&K, particularly the Valley. Gaining from the political mal-adroitness shown in the State, the continued disillusionment with the political parties, politicians, and above all an ever present sympathy for Pakistan amongst large segments of population particularly in the cities, the ISI has had a string of successes which cannot be denied. Money channeled from the Gulf countries, furthering a particular school of Islamic thought in the Valley aided and abetted Pakistani plans. The obvious inability of security forces to prevent infiltration and exfiltration of men and equipment across the Line of Control only made the task of the Pakistanis easier. This entire, still continuing episode, has become a major challenge for the ISI. Every stratagem learnt in Afghanistan will be used in Kashmir. Can the Indian State rise to meet the challenge in Kashmir?, Because on its ability to succeed lies the future of a united secular India. It

would be appropriate to record that one of the greatest advantages handed over to the ISI has been by such Indian politics which has brought disillusionment and a sense of extreme insecurity to the second largest religious group of this country, thus making it an easy prey to the ISI. The Pakistanis could not have asked for a greater bonanza, and none of their recruiters could have achieved such success as has been achieved for them by this type of Indian politics.

THE ISI AND THE FUTURE

How does the ISI look to the future? As the intelligence gathering and dirty tricks department of the Pakistan Army, the ISI has three challenges facing it. The first one is the manipulation of the internal political situation inside Pakistan to the advantage of the Pakistan Army. In this sphere the present regime of Ms. Bhutto will continue to remain a target of ISI's attentions. As long as she does not compromise on the blue-print drawn-up for progressing Pakistani national security interests as perceived by the Pakistan Army and which include programmes prepared for Kashmir and Afghanistan, she will be allowed to function. There are some hot-heads within the present regime who would like to tangle with the ISI as an indirect way of putting the Army in its place. The arrest of one Brig Imtiaz (retd), who as a former member of the ISI was believed to have master-minded the de-stabilisation of Ms. Bhutto's earlier Government appears to be a case in point. Whether this was done with the knowledge of the present ISI set-up and the Army or without taking them into confidence will determine the course of future events. Possibly, it will turn out to be no more than a storm in the teacup and everything will be hushed up. On the other hand, like one Brigadier Yousuf, who headed the Afghan Bureau and later fancied himself to be the whole and sole arbiter of the Afghan policy, for which megalomanic thoughts he was kicked out, Brig Imtiaz may have fancied himself as a king-maker in his own right and is now being served his just desserts with the approval of the Army and his former employers, the ISI. Whatever be the outcome of this particular incident the ISI as the Army's watchdog will keep all the political parties under close surveillance and help rein them in if they get out of line.

In Afghanistan the final question of having a fundamentalist Islamic dictatorship installed with ISI's backing or the possibility of a moderate government assuming power with the backing of Ms. Bhutto, the Americans and may be even the Russians, will continue to remain an irritant between the ISI i.e., the Army and the Government.

In Kashmir, the ISI's will and plans will continue to prevail, whether Ms. Bhutto likes it or not. The only way to help Ms. Bhutto out of her predicament is for India to completely and un-ambiguously defeat the ISI's designs. The

Nation's aim has to be to eradicate terrorism and insurrection in Kashmir, not merely to contain it. Defeating the ISI's designs is to defeat the plans of the Pakistan Army, for that is the face and the real power behind the mask of the ISI and the veil of Pakistan. Ultimately even the Pakistanis may well be thankful to India for putting this master of theirs in its proper place.

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Impact of Technology As a Battle Winning Factor

CAPT A N MUTALIK

INTRODUCTION

On the very first night of the Persian Gulf War UN special force troops in conjunction with OH-58 helicopters infiltrated through the border of Iraq and Kuwait and eliminated the two Air Defence Command Centres which formed the eyes of the Iraq forces Air defence. The low flying AH-64 Apache Helicopters having evaded detection were on the target and wasted no time in destroying the laser illuminated AD comd centres with Hellfire missiles. This paved the way for the first wave of attacking fighter bombers, which gave Baghdad a bloody nose. Such was the technological impact which had a war winning edge over the Iraqis.

From the Gulf war and all earlier wars one picture emerges clearly and that is sooner or later it is the side having technological edge in war which is going to win. In order to have technological edge in war over adversary most of the countries have started modernising their war machinery and existing inventory of arsenals. In a sense, the race to acquire exotic arms has now come to acquire the moral equivalent of war, Ex President Reagan articulated this initially and this has justified the present American quest to maintain a technological edge in war.

AIM

To discuss the impact of new technology weapons as a battle winning factor on the role capability of the armed forces and need for any doctrinal and organisational changes.

PREVIEW

In order to discuss the significance of new technology weapons as battle winning factor, the essay would be structured out as follows:-

(a) The new technology weapons & equipment.

(b) The impact of new technology weapons & equipment as battle winning factor on the role capability of armed forces.

This essay has won the First Prize in group 'B' of the USI Gold Medal Essay Competition in 1993.
Captain Mutalik is serving at the Headquarters of the National Security Guard (NSG), New Delhi.

(c) Need for doctrinal & organisational changes.

THE NEW TECHNOLOGICAL WEAPONS AND EQUIPMENT

The Gulf war has already given us an insight into the new technological advancement in various weapons and equipment. For exploiting the full potential of these weapons and equipments it is essential to know them. Some of the technological weapons and equipment are as follows:-

(a) *Surveillance of battlefield* : This is achieved by various types of aerial reconnaissance means as follows:-

(i) *Satellites* - These form platforms from which remote sensing observation is made. During the Gulf War some satellites used in surveillance include:-

(aa) *KH-11* Satellites provided visual and thermal infra red digital imagery, even though all the five satellites were impeded by clouds at some time or the other.

(ab) *LACROSSE* Radar satellite was used to track surface movement.

(ii) *Surveillance Aircraft :* The surveillance aircraft which played important part in the Gulf war included:-

(aa) *TR-1, RF 4C and TORNADO:* These are high flying aircraft which made use of panasonic oblique photos and infra red line scans.

(ab) *E-8* Joint surveillance target attack radar system. It relayed, collected information and directed it to E-3 AWACS.

(iii) *Unmanned Aerial Vehicle (UAV)* - The unmanned aerial vehicles have electro-optical sensors and are employed for surveillance and other tasks. Some examples of the unmanned aerial vehicles are :

(aa) Tactical Air Launch Decoys.

(ab) *Vanguard.* This carries out observations and has Infra-red Camera. Some underwater vehicles are also being developed.

(iv) *Surveillance Radars.* Man portable surveillance and target acquisition systems make use of thermal, laser and also scan electronically.

(b) *Precision Guided Missiles.* They are laser guided and electronically guided and are used to fire from various platforms. Smart Bombs are also guided by the same principle.

(c) *Main Battle Tanks.* The success of the Gulf campaign depended heavily on the capabilities of MI series tank. The MI ABRAHAM tank had special armour package which proved extremely successful. There were no confirmed penetration by Iraqi projectiles. The KE (Kinetic Energy) ammunition consistantly achieved catastrophic kills (Turret Separations) against Iraqi T-72 tanks.

(d) *Electronic Warfare.* Increasing use of electronic warfare platforms. Besides AWACS (Airborne Warning and Control Systems), EF-III A fighters used deception jammer pods which had instantaneous frequency monitor which could identify within micro seconds any threat from any surface to air missile (SAM) and carry out deception accordingly. The pods also enabled the aircraft to switch on to other roles.

(e) *Mission Planning System.* This is a computer aided system. It calculates all relevant data and plans complex routes through which the aircraft or the PGM can manoeuvre safely. This saved 10-12 hrs for each undertaking during gulf war.

(f) *Army Aviation.* It played a vital role during the Gulf War. Significant contribution was made by Attack helicopters. AH-64 APACHE helicopter has stand-off capabilities as it can engage armour from 8 kms distance.

The Key Technolgical Thrust Areas for the Future. The areas identified by various countries include:-

(a) *Laser Guns.* This can blind the enemy in open and affects the morale of the troops thus leads to winning edge in battle.

(b) *Hypersonic Weapons.* These are kinetic energy devices of 3 lbs each and are released at hyper sonic speed (14 Mach). They can penetrate any obstruction and destroy the target by sheer force of its speed.

(c) *Acoustic Weapons.* This would sound at frequencies and volumes that could break windows, it can in-capacitate humans or even damage internal organs at short ranges.

(d) *Electro Magnetic Pulse.* By releasing intense pulse of microwave energy, it is capable of paralysing almost all modern western defence systems. Once developed it may be used to destroy radars, C^3I systems and other targets. This is still under research and developmental stages.

(e) *THAAD System With SAM.* This is a development on the existing Patriot missile system. THAAD is High Altitude Air Defence System. They comprise of ground based sensors and intercept to kill incoming ballistic missiles.

Many systems of Engineers and Infantry are being upgraded after their success in the Gulf War. These include Giant Viper mounted on Combat Engineer Vehicles. More additions are being considered for figher aircraft. The bridging equipment is also being produced after realisation of shortfall in existing capability. In the infantry weapon system a need was felt to increase the range of 8 mm Mortar. The 5.66 weapons concept and the protection of infantry from chemical warfare and laser attack are also being worked upon.

Impact of Technology on the Role Capability of Armed Forces and Intelligence Agencies

The future battle field environment would stress on the capability of mobility, greater and accurate fire power and an almost perfect communication system. A combined arm team will have integrated and dedicated air elements. Individually the fighting arms will be more self reliant. The impact of technology on role capability of all the three services and intelligence agencies merit attention. The impact on the three services and intelligence collecting agencies will be discussed in turn.

Army

The technological developments will greatly enhance the role capability of the Army in many ways. The weapon systems will be more accurate, lethal, and engage at greater ranges.

(a) *Infantry.* The capability of infantry would be enhanced considerably. Infantry would be more versatile and self reliant due to the following:-

(i) *Svl and Detection Eqpt.* Infantry would be able to quickly identify the enemy under all weather and visibility conditions at greater ranges, by means of BFSR sensors (both acoustic and seismic). Night vision devices would enable making night transparent.

(ii) *Air Defence.* With the induction of man portable surface to air defence system MANPADS the air threat would be minimised. Though requirement now would be target acquisition radar to alert MANPAD.

(iii) *Electronic Warfare.* With manportable EW system the enemy

electronic systems could be jammed. This is particularly relevant in view of dispersed nature of future wars.

(iv) *Mobility.* With availability of airlift capability in the form of the helicopters and fixed wing aircraft flexibility will be achieved.

(v) *Protection.* Individual soldier can be protected from sharpnels and bullets by wearing Kevlar fibre jackets. NBC protection will also be enhanced in future.

(vi) *Anti-tank.* 120 mm Mortar which also fires anti tank shell will augment anti tank capability.

(b) *Armour.* The armies world over are inducting/upgrading main battle tanks for obvious reasons. The impact of technology has had tremendous impact on their performance as has been witnessed during the gulf war. Some salient points are :-

(i) *Armour Protection.* Heavy armour modification, like reactive armour, compd armour and CHOBAM are some of the developments. This has increased the protection against all known types of anti arms armour.

(ii) *Mobility.* Gas turbo engine technology now enables the tank engines to run continuously for more than 100 kms at a stretch. It also has multifuel capability and quick starting facility. The turbo engines save fuel, are more powerful and give high speeds.

(iii) *Firepower.* Development of 120 mm & 120-140 mm main gun will enhance engagement of targets at long ranges. Increase in the kinetic energy of round to above 1650 m/s velocity by increased aerodynamics will prove devastating. An example is the catastrophic effect (turret separation) caused on T-72 tanks during Gulf War by the MIA tanks. Further development in using liquid propellant would increase the ammunition carrying capacity.

(iv) *Fire Control System.* This would increase the first round hit probability and would enable tanks to attack from a greater standoff distance.

(v) *Navigation.* With the advent of navigation by means of satellites like Navstar Global position system the capability to strike deep in hostile terrain would be achieved.

(vi) *Survivability.* Will be increased by mission planning system which is computer aided and calculates the speed, range, and analyses whether enemy sensors can detect the tank etc. This also saves 10 to 12 hours to plan complex routes through enemy defences.

(vii) *Night Fighting Capability.* Will be greatly enhanced due to night vision devices which will make warfare more transparent during night times. This will enable mech forces to operate round the clock.

(viii) *AD Capability.* Surface to Air Missiles (SAM) launchers will minimise the air threat and augment the air defence capability.

(c) *Artillery.* Arty systems have become sophisticated due to incorporation of technical devices and weapon systems :-

(i) *Accuracy.* Artillery delivered high precision munitions are effective for attacks on moving tanks. The accuracy of artillery ammunitions has improved considerably with the introduction of SMART bombs and Cross wire system which gives corrections by predicting muzzle velocity.

(ii) *Target Acquisition.* This has been enhanced due to remotely piloted vehicles. Battlefield surveillance and target acquisition radar on wheeled AFVs have improved battle nuclear capability of firing nuclear arsenal from guns.

(iii) *Laser Range Finders.* Ranging upto 20 km with an accuracy of 5 meters has already come into western armies. These can be utilised by Artillery OP very successfully.

(iv) *AD Systems.* With proliferation in missile technology the AD systems today are very accurate.

(d) *Engineers.* Quantum jump in technology has minimised the manual engineering efforts.

(i) *Excavating Field Defences.* The light mobile diggers, light wheeled tractor, medium wheel tractor and combat Engineer tractor have reduced the timings required for preparing field defences.

(ii) *Mine Laying.* Remotely delivered mine system can fire anti personnel mines and anti tank mines and cover a strip of approx 120 m in a minute.

(iii) *Bridging.* With the advent of launch technology of bridges like scissor and slide and use of bridge laying tanks, the capability of mobility, survivability and compatibility to armour has been enhanced considerably. The strength and time required for launching has also been reduced.

(iv) *Minefield Breeching.* Further addition of choice for breeching

by close line wire clearing (CLWC) or Fuel Air Explosive has enhanced the capability.

(v) *Matching Mobility.* General purpose combat Engr vehs have enhanced mobility, counter mobility and survivability task. They can also be used in amphibious operations and can keep up pace with the main battle tanks.

(e) *Communication.* This field has witnessed rapid advancement within a very short period of time. Some technologies which have enhanced the role capability of armed forces are :-

(i) *Integrated Circuit Technology.* This has made the Battle Fd Radio Link more reliable.

(ii) *Microchip Technology.* This has made radio communication devices resistant to jamming and has further reduced the sizes of devices considerably.

(iii) *Micro Electronic Technology.* This enables communication security (COMSEC) by use of encryption, decryption and frequent hopping.

(iv) *Ptanmigan Technology.* Communication on move to any place is possible by means of network of radio nodes. Telephones in vehicles will save efforts.

(v) *Computer Technology.* Data fed in at one point is available to all so loss of any individual vehicle does not dramatically degrade the system. This system also gives commanders information on tactical disposition of friendly and hostile forces by means of manoeuvre control system.

(f) *Army Aviation.* The impact of new technology on the role capability are as follows :-

(i) *Armour Protection.* These helicopters have armour protection like main battle tanks.

(ii) *Survivability.* Multicoloured dome of mirror due to stealth technology sends false signals that lure enemy missiles away from the aircraft.

(iii) *Fire Power.* Fires missiles, guns and also engages tanks from a stand off distance.

(iv) *Night Flying Capability.* It has laser guiding pods and night vision devices for aircrew to see.

(v) *Early Warning System.* By virtue of its surveillance capability of detecting targets both at day & night times.

(g) *Logistic Support Units.* Logistics was a key element in the Gulf War. It made it possible for large ground units and fleets of aircraft to have optimal support permanently and immediately to hand. On the other hand, it was also the Iraqi's 'Achilles heel' because their logistics effort was the target for allied air bombardment. The logistic transport trailer veh, (VTIR) provided movement and mobility support for armoured vehicles. Technology has enhanced the following logistic capabilities :-

(i) Movement support and traffic control.

(ii) Mobility support for armoured vehs (APCs, MBTs, Artillery and Engineers).

(iii) Operational resupply.

(iv) Airlift.

(v) Sealift and trans-shipping.

(vi) Staff and rear area support.

(h) *Evacuation of Casualties.* Evacuation has become faster due to airlift capability. It is now possible to provide all relevant data to the hospital regarding the case while on the move. This will reduce the delay involved in cumbersome procedure and enable casualty treatment immediately on arrival without wasting time on other formalities.

In any operation on the land the largest contingent always comprises of the Army. The Air Force and the Navy will invariably have to co-ordinate with the Army authorities for facilitating smooth conduct of operations. Impact of new technology on the Navy include:-

NAVY

Other than the impact on weapon systems which is similar to that for the Army other technological impact on role capability are as follows:-

(a) *Propulsion.* It has been proved that nuclear powered engines do not require replenishment for one million kms run. Gas turbine engines have quick start than any other and higher speed. Nuclear powered attack submarines are faster, better armed, and are deeper diving than before.

(b) *Surveillance.* Capability will be enhanced by remotely (RPVs) piloted vehs, unmanned underwater vehs (UVVs) while sensors will reduce dependence on radars, sonar equipment will play a greater role in surveillance underwater.

(c) *Survivability.* This will be enhanced due to development in C^3I system; digital systems enable much greater degree of integration to take place accompanied by data base distribution and duplication of facilities.

(d) *Accuracy*. Weapon performance crew effectiveness will be enhanced due to stabilisers.

(e) *Anti Submarine Warfare Capability*. By developing decks on board the frigates for helicopters, it would be equipped with anti submarine system. The ASW/Anti Ship Strike role will be enhanced by fitting dipping sonars, search radars and anti-ship missiles.

(f) *Air Defence Capability*. Will be further enhanced by vertically launched surface to air missiles. Gun systems will be augumented by surface to air missiles.

(g) *Navigation*. By navigation radar and Navigation Star satellites it will be further enhanced.

(h) *Communications*. By developing communication under water the effect of jamming will be minimised.

(j) *Naval Aircraft*. Will be able to take on the roles of ASW, AD, EW and AEW.

(k) *Torpedoes*. Development of light weight, wire guided torpedo which can home on submarines under water. It can be fired from air vessels or submarines. It can be used for surface targets as well.

(l) *Night Visual Systems*. Being used by divers enable seal divers to carry out coastal operations at night time.

(m) It has been observed that a ship which specialises in one particular role suffers tactical limitations, so more vessels are required. Technology will also provide answer to this dilemma.

AIR FORCE

The Gulf War has proved the old adage " He who commands the skies, commands the ground battle". The impact on role capability is as follows:-

(a) *Strategic Strikes*. Computer aided mission planning systems will save time and increase survivability. Long range missiles would help in carrying out interdiction with the help of global positioning system. Navigation would be easier during day and night with the introduction of laser pods. This would also enable effective neutralisation of targets by missiles.

(b) *Air Defence*. The induction of theatre high altitude air defence system and surface to air missiles has enhanced air defence capability.

(c) *Electronic Warfare*. Electronic Warfare pods can be fixed on air-

craft. This will act as Electronic Warfare platform and also act as a force multiplier.

(d) *Close Combat.* With increase in maximum angle of attack, aircraft control along different axis, carefree handling due to advanced flight control system, the close combat capability will be further enhanced.

(e) *Propulsion.* This would be enhanced by using fighter engines which give high thrust in "dry" condition. This will also give advantages in fuel consumption and infra red emission signature.

(f) *Multirole fighter.* Better avionics, increase in throwweight, reduction in transit time, and above all flexibility, the multirole fighter is ideally suited for engaging target systems ranging from airfield complexes to C^3I centres.

INTELLIGENCE AGENCIES

So far as intelligence agencies are concerned, they are required to aid (through constant supply of actionable intelligence and real time information) operational planning, decision making, and reactions to emerging situations.

The impact that technology could have in the process of fulfilling the role assigned to the intelligence agencies are as under:-

(a) An intelligence system would now be based on a series of interacting central computers and peripheral equipment at various levels.

(b) A computer system will make rapid collection, analysis, interpretation and synthesis of intelligence followed by immediate dissemination to user formations by way of digitilized maps, facsimile, marked and annotated air photos and flash reports.

(c) Some devices of modern technology which would emphasise the process would be as under:-

(i) *Battlefield Surveillance Radars.* Ranges of 20-28 Kms are available with present day systems.

(ii) *Remotely Piloted Vehicles (RPVs).* These have a very small radar signature and would provide combinations of many facilities for a variety of missions such as day/night photography.

(iii) *Unattended Sensors.* These are electronic audio/video devices dropped in isolated/remote areas to pick up signals/images and transmit them to a central unit for briefing and collation.

The impact of technological developments on our role capability calls for reviewing our doctrines and restructuring our organisation to suit it. It is thus seen that technology is likely to be a factor that will contribute most to achieving assymetry between the contending forces and it will be an increasingly important battle winning factor.

DOCTRINAL AND ORGANISATIONAL CHANGES

There is no doubt that technological developments associated with the application of force will profoundly affect the nature of future war. The battle field will be less dense, much deeper, more open and less linear. The ability to collect real time intelligence and information will be greatly enhanced.

The likely characteristics of modern war will be :-

(a) In the initial stages of war 'strategic air raids' will be launched by contending forces.

(b) The pace and rhythm of war will be accelerated. A ground war of say 100 hours will compress into it activities that in earlier times may have taken weeks.

(c) War will be three dimensional and there will be no significant difference between forward and rear areas, and combat or non combat forces.

(d) The intensity of war will increase and the period of actual conflict is likely to be one swift sharp engagement.

(e) Technology will contribute towards achieving assymmetry between contending forces.

(f) Command, control, communication and intelligence will allow centralised planning and coordination of many functions.

(g) Human factor will play important part as modern weapons require advanced skills.

(h) Logistics will play an important part.

The effect of this at operational and tactical levels too will be profound:-

(a) Need for integration of ground and air as well as sea and air forces under a unified theatre command.

(b) There will be centralised planning and coordination, and execution will be decentralised.

(c) Defensive deployment in greater depth and concentrations will be avoided.

(d) Offensive forces will be in two echelons: ground echelon to achieve penetration, and air echelon for carrying out envelopement and strike at rear areas.

(e) Combat support and logistic system will need to be radically overhauled.

There is a need for a much more detailed analysis to formulate doctrines based on prevailing operational environments and weapons availability. Only some deductions can be drawn.

(a) The imperative of mobile operations will mean that territory will have to be traded for space, time and subsequently regained once situation is favourable.

(b) Greater reliance will be placed on helicopters.

(c) In the plains, mobility will need to be restored through greater mechanisation.

(d) The battlefield must be fully integrated at all levels. Unified theatre commands are absolutely essential for this.

(e) Targetting doctrine and target acquisition will need to be completed before hostilities break out. These will need to be carefully coordinated upto strategic level.

(f) Survivability of key installations, support echelons, command and control centres and communication facilities will need greater emphasis.

(g) Fundamental changes will have to be initiated at organisational level and in method of logistics support.

CHANGES RECOMMENDED IN THE ORGANISATION OF THE ARMY

In view of the technological impact and deductions for formulating doctrines I feel following changes and modifications are required in the organisation:-

(a) *Command and Control.* In mobile operations an Infantry divisional HQ will have to control the battle in front. A tactical HQ or a strong rover group will have to be detached. This tactical HQ detachment will have to be mobile. All the Brigade HQs will have to be mobile. There

is also a requirement of two ground liaison officers in a brigade instead of one at present due to the dispersion involved in conduct of ops. In the rear divisional HQs, mission planning system would be necessary for calculating relevant data and planning complex route for Army aviation helicopters and armoured tanks. This will save time and increase survivability of our forces.

(b) *Armour.* In an offensive operation armour in an infantry division is not sufficient if the division is required to develop its operation towards the depth obstacles in a multiple obstacle scenario. Moreover, in a forward zone there is no reserve left to influence the battle. I am of the opinion that if not an additional regiment, atleast an additional armoured squadron should be allotted to an infantry division. The reconnaissance troops will have to be based on 'A' vehicles with matching mobility.

(c) *Attack Helicopters.* A squadron of each will be ideal for each division. To start with one flight could be provided to each Inf Div/Mtn Div and one squadron for Armoured division.

(d) *NBC Coy.* This should be at each Div HQs and each lower formation should have a platoon each. The platoons should have a section each for decontamination treatment of casualties.

(e) *Electronic Warfare.* In view of dispersed battlefield it will be necessary for having an EW section at infantry battalion level and also brigade HQs. They will have portable electronic warfare devices. The organisation at divisional level recommended would be HQ EW Coy, Intercept Platoon, Jamming Platoon, Anti Jamming Platoon, and Analysis and Dissemination detachment.

(f) *Air Defence.* To augument the air defence capability, it is recommended that each armour tank should be equipped with surface to air missiles. Similarly infantry units should also have an air defence platoon and be authorised surface to air missile launchers.

(g) *Small Arms Weapon System.* Infantry should have state of art technology weapons in view of the low intensity conflict crisis. 5.56 mm rifles and sniper rifles are versatile and ideal for Infantry.

NAVY

Most of the countries still have warships of Second World War vintage. The Gulf War has set the ball rolling to restructure and build a modernised Navy, as follows:-

(a) *Frigates.* In order to protect the coastal defence more frigates

would be required to safeguard the vast coastal area. Technology would provide answer either to induct more frigates with specific role or lesser number of frigates with multi-role capability. Anti submarine warfare role may have to be given to all the frigates.

(b) *Air Defence Role.* Each Frigate should have a dedicated helicopter for carrying out a variety of tasks. A deck for landing would also be required.

(c) *Submarines.* More number of nuclear propelled submarines would be required. This will further strengthen the naval role capability. Submarines could be given roles and grouped accordingly for specific task.

(d) *Missiles for Long Range Engagement like Cruise Missiles.* To be organised for firing from submarines and Frigates.

(e) *Nuclear, Biological, and Chemical Cell.* This will have to be on board of every ship to counter this menace.

AIR FORCE

While the Gulf war has revealed the importance of aircraft with multi role capability, it is essential to upgrade own fleet accordingly. Some organisational changes recommended are:-

(a) *AWACs. (Airborne Warning & Control Systems).* This is the necessity of the hour for managing the new threat scenario.

(b) *Mission Planning System.* To be installed in all the Joint Operation Centres. This would provide data and chalk out task and route for the close air support, fighter bomber mission, etc.

(c) *Air Defence.* There is a requirement of surface to air missile systems based on the principle of theatre high altitude air defence system which would operate against incoming ballistic and inter continental ballistic missiles. This would have to be deployed so as to operate in any direction.

(d) *Multipurpose Aircraft.* More squadrons should be raised. Aircraft should have stealth properties and be capable to bombard, intercept and carryout electronic warfare and other tasks. Such aircraft may have to be so modified as to have more "add ons". The "add ons" would comprise of pods and missiles which would be underslung below wings.

(e) *Transport Aircraft.* Like IL 76 and AN 32 should be allotted to Corps in direct support role for the airlift of troops and for according logistic support. Some M18 helicopters could also be allotted for carrying out special missions etc.

(f) *Nuclear, Biological, and Chemical Warfare Cell.* Each static formation on the ground should have this cell for protection against NBC threat.

CONCLUSION

There can be no doubt that in war, advanced technology has a major place; indeed there are many who would say that it is the central issue. Weapons of war today readily pass on from the developed to the developing world. The arms trade is no longer confined to obsolescent weapons, but those that are in service in the armies of the developed nation as well as those that are yet to enter the service are being traded increasingly. This makes the conflict environment even in the developing world, a high intensity one. There is, therefore, a need to understand the potential of new technology and study its impact on military doctrine.

Tendency to develop an art of warfare that is abstract in nature and out of touch with current situation should be curbed. The development should also be within the economic reach of the country. It is also essential to have indigenously developed weapons and equipment to provide the assymetry needed in war.

During the Gulf War, coalition force pilots were shown video films of Baghdad as it would appear when flying over the city. This was possible due to a simple method in which photographs were taken from commercial satellites and simulated by means of computers. This proved very useful and economical. We should also exploit such potential and creative human intelligence.

Again it needs no elaboration that, had it not been for the destruction of the two air defence control centres on the eve of the Gulf War by UN special ground forces and the attack helicopters, it is obvious that the air success achieved by UN Forces would not have been so complete. It is thus the man behind the weapon that counts.

Military Leadership in the Modern Environment

LT SANJAY J SINGH INDIAN NAVY

"Leadership is the capacity to frame plans which will succeed, and the faculty to persuade others to carry them out in the face of death."

-- Lord Moran

INTRODUCTION

The soldier is the noblest development of mankind, for it is he who is always called upon to perform the highest act of religious teaching - sacrifice. Military leadership is the art of harnessing this nobility and calling upon the soldier to voluntarily act on the leader's bidding, and the science of determining the best possible manner in which to exploit the operational environment and attain success. While leadership has been largely termed as an inborn skill, there is no doubt that it is also developed, for no military commander can be a successful leader without a thorough understanding of the society - and its corresponding social, economic and political environment - which gave birth to the soldier, as well as the technological-cum-operational environment in which that soldier faces death. Any changes in these environment would obviously affect the principles of military leadership.

History is replete with examples of military operations where there was a failure of leadership. This was primarily due to inadequate appreciation of the operational environment and incomprehension of the soldier's psyche, whereby the leader could not adapt his stratagem to the prevailing environment and consequently failed to exploit his strengths. In other words, failure of leadership has taken place wherever leadership imperatives were not related to the social and operational environment.

In an ever-changing socio-economic and battlefield environment, military leadership must have a near dynamic nature. The paradigm of military leadership has been changing with the environment in which it must operate, which is evident from comparing some leadership trends in different eras. For example, at the time of the Mahabharata, the military leader was expected to announce his intentions and fight only by day. Today, surprise is one of the

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inviolable principles of war and a leader displaying contrary inclinations is likely to be sacked. Even till early this century, war was considered to be a gentleman's game. Now it is a brutal conflict, which justifies all means for the eventual victor. It was thus that the U.S.A, after dropping nuclear bombs over Japan in August, 1945 and decimating two cities, killing above 2,00,000 civilians - including women and children, and injuring unborn generations actually tried the losers for their war crimes!

There is a need to recognise the changing nature of war and society, and analyse its effects upon military leadership. The nature and scope of military leadership have changed considerably in the present century, and have undergone further transformation in the last few decades. Let us examine the impact of society's changing social, economic and political environment on the soldier's psyche, and the technological/operational imperatives of the modern battlefield, which together govern the dynamics of military leadership.

Society and Military Leadership

There have been significant changes in society, in social and cultural terms, in the economic dimension and the political environment at domestic, regional and global levels. These have had a corresponding impact on the psychology of the modern soldier. Military leadership must understand this changing psychology in order to effectively exercise its skills. It will accordingly have to re-appreciate traditional motivation tools and leadership philosophies in relation to the modern environment.

Society and military leadership are more closely related today than in the past, when the army fought its battles away from the centres of civilian population and even remained secluded in times of peace. Earlier, a large section of the military was drawn from specific classes or castes, giving rise to the concept of martial societies. Due to this belief, a soldier was being groomed for martial activity since birth, with the social/class value system providing the necessary motivation. However, in the modern social environment this equation has been changed.

Firstly, the defence forces are now a heterogeneous mix of religions, castes and classes. At the time of independence, about a third of India's defence forces, particularly the officer corps, was drawn from the north-western states of Punjab and Rajasthan. Today the composition is balanced, and is more evenly drawn from all parts of the country. One immediate effect of this is that leadership has been rendered a more complex affair. In a more diffused military society, the soldier comes from varying social backgrounds and his

indoctrination with military values commences mostly after he has joined the service. Class and racial pride can no longer be used as motivating factors in view of this heterogeneous mix.

The strategy of keeping the armed forces secluded from the rest of society, thereby aiding development of regimental motivation, is also not possible today as a result of increase in the soldier's awareness due to better education and improved means of communication and social interaction. A soldier is keenly aware of the motivations in civilian life today, and development of abstract idealism such as racial or regimental pride cannot be made the basic tool of modern leadership.

On the other hand, civilian society is also more aware of the role and scope of its armed forces. With the growing commercialisation in society over the last few decades, the social status and image of the soldier had suffered correspondingly. This issue has been further affected by the changing scope of warfare, which has expanded from aiming for annihilation of the enemy's armed forces to destruction of his war potential and national will. Consequently, industrial and civilian population centres are being increasingly targetted in times of war. In fact, civilian targets are now assuming a strategic value in war, as witnessed during the recent Gulf conflict. This harsh fact is being rapidly assimilated by society, with technological advances and better communication facilities bringing the concept of collateral damage home to even the remote rural areas. The likely impact of this on the military system can be appreciated by reviewing the background of the supposedly martial classes. In Indian history, all but one of the invading forces attacked from the north-west. The people in this region were therefore subjected to varying levels of collateral damage, whereby the value of a strong defending force was learnt by them in the hard way. In consequence, the military was respected and granted a relatively higher status than in other parts of the country.

The extension of war to non-combatants, and enhanced destruction due to advances in military technology, will have a dual effect on military leadership. At one level, there will be a re-emergence of security consciousness in society as the security environment deteriorates. The soldier who takes up arms tomorrow will be more aware of the consequences of the war on his home and family. This will provide a motivation tool to the military leader, with the modern light brigade possibly observing a different adage from the one given by Lord Tennyson:

"they will know the reason why, their's will be to do or die."

On the other hand, this will also place heavier pressure on the leadership

which will have to contend with higher expectations of leadership skills and management techniques from the men under their command.

A second consequence of expanding war aims will be increasing pressures on the military leadership from external sources as well. With society becoming more aware of, and more involved in, the process of war and its consequences, there will be greater pressure from without the purely military society. In this regard, the press and television are likely to play a major role in examining the actions and efficacy of the military, and disseminating this information to the civilian populace. The U.S failure in Vietnam, the steady high motivation level of Israeli forces, and the long internal debate within the U.S.A. on the rhetoric and strategy for the US-Iraq war, followed by the success of U.S. military leadership, are all varying examples of the effect of their social environment on the military and the consequent challenges to military leadership.

The changing economic environment in the country will also influence modern leadership. The standard of living and life expectancy have both risen in recent years. Society has also experienced commercialisation to a large extent, wherein life and values have tended to become commercial talents. Human life is no longer as cheap as in the past, and a military commander will have to consider this factor carefully whilst planning his strategy. The U.S. war strategy in the Gulf was largely influenced by the requirement to experience minimal loss of lives, in order to maintain both domestic public opinion and the morale of the troops.

Another consequence of the economic environment on the soldier's psyche has been a dilution of martial instincts. In previous times, every campaign or war was accompanied by looting or pillaging and other economic grants to the victorious force. It may by recalled that Napolean had motivated his hitherto economically deprived, and consequently demoralised Army of Italy by promise of victory and loot in the plains of Italy. Also, the 'younger sons' of Britain, who were responsible for the extension of the British Empire, acted for 'God, glory and gold'. Thus, the military was considered to be an avenue for attaining success and fortune, thereby fulfilling personal as well as family ambitions. Today, however, such economic aspirations cannot be met within the armed forces due to changes in domestic and international political environments.

The military has become a more professional service, still demanding strong men of the highest moral and martial calibre on the one hand, but ignoring the inherent economic and other ambitions natural to any man of strength and ability. In yesteryears, a victorious general in the battlefield could be assured of power and prestige, with accompanying economic gains. Today,

a victorious commander in war - such as General Norman Schwarzkopf opts to leave the military instead, which would accord him the prestige and promotion only, in order to convert his success into economic profit by writing books (General Schwarzkopf has been offered two million dollars for his, ghost-written memoirs) and serving on the boards of multi-national corporates. This is indicative of the change in the modern military environment, which is providing a decreasing economic attraction in an increasingly commercial society.

At the other end of the bridge, the military is also failing to attract the men of required calibre due to its relative inability to satisfy the latter's economic and personal aspirations any more. Consequently, there is a diversion of this talent to other fields and professions which provide better commercial ventures. As a result, there is a slow dilution of military talent taking place within the armed forces at all levels, which may become more acute in the years ahead.

A balancing factor to the reduced scope of fulfilment of a soldier's economic aspirations must be found, through improvement of service conditions and greater satisfaction of his other natural ambitions born of the prevailing socio-economic environment. Military leadership will accordingly have to adapt earlier skills to the changed psychological paradigm of the modern soldier.

An examination of the changing political environment at the domestic, regional, and global levels would also assist in appreciating the soldier's new psychological motivations. There has been a grass-root change in the political structure in Indian domestic society. The joint family system is heading towards obsolescence, as a result of the economic and social/cultural changes in society. The concept of equality between the sexes and generations is firmly settling into the domestic scene, albeit slowly at the rural level. Higher education, greater social awareness and availability of better economic opportunity have given rise to greater individuality at the domestic level. The young man donning a uniform today is psychologically better prepared to analyse situations beyond face value and take independent decisions.

At the regional level, there has been an ongoing search for political stability. This has led to frequent use of the armed forces in maintaining the state's stability against internal threats, whereas they were created and trained for safeguarding the nation's security against external threats. The soldier, traditionally kept away from politics, is increasingly being tasked with political situations and is facing growing religious fundamentalism and parochialism thereby. The psychological impact of these internal insecurities and political

uncertainties on a soldier must be considered and catered for by the higher military leadership, whilst providing law and order assistance to civil authorities and simultaneously moulding the soldier for his role in war.

At the global level, there has been a patronage of aggressive foreign policies, and military intervention by extra-regional forces. In the last two decades, the U.S.A. alone has about 460 incidents of direct intervention in Third World affairs to its credit. The modern global strategic environment has witnessed the inviolable nature of changing political equations, and the maintenance of national interests in preference to support of supposed allies. The U.S.A-Iran-Iraq relations are a prime example of the same. This is also the era of rapid military deployments in various 'spheres of influence'. Modern military leadership must be prepared, accordingly, for the fluidity in international relations, and the role of the military in preventing coercive diplomacy or maintenance of regional security.

Military leadership has two principal tenets, as mentioned earlier - motivation and employment. Whilst the first is largely an outcome of the associated social environment, the latter comprises of the tactics and strategy to be adopted in war wherein the factor of motivation would be employed. Hence, imperatives of military leadership in the modern environment must also be studied in the context of the emerging technological/operational environment to obtain a true appreciation of the present and future leadership paradigms.

Leadership and the Battlefield Environment

Due to advances in military technology, there has been a revolutionary change in warfare and the battlefield environment, deeply affecting the dynamics of leadership. At the outset, there has been a considerable increase in the nature and pace of war. Till fifty years ago, a defending force received ample warning of impending war, which could be upto a few months. Today, the pace of mobilisation and speed of operation have increased exponentially, resulting in a possible warning of a few days at the most on the strategic level, and a few hours or minutes, perhaps even seconds, on the tactical level. This has drastically reduced the response-time available for the military commanders, necessitating a constantly prepared defence and continuous analysis of the strategic and tactical security environment.

Security imperatives would therefore entail study of national objectives by the military leadership and analysis of the changing international equations, wherein the military potential of possible adversaries and their regional security perspectives could be gauged in relation to national interests. The impact

of emerging technologies and their operationalisation in the battlefield environment, and thereby on the strategic considerations, would also need to be borne in mind by military commanders in planning for the nation's defence. Unlike in the past, where the military leadership was secluded from the government in accordance with the prevalent socio-economic and battlefield environment, most democratic states have placed emphasis today on the military observing a closer relationship with the formulation of national security policies and maintenance of national interests.

In the present environment, national security imperatives demand integration of higher military leadership with the national decision-making process. The higher level of defence preparedness enabled thereby could prove critical in the light of the reduced response-time available. The higher defence organisation will also need to be restructured in keeping with the imperatives of modern warfare, and the military leadership must prepare itself for a more difficult role with its resultant vulnerabilities.

At the tactical level, the fractional time for response available today places heavier burdens on military leadership. It precludes consultations and conferring with superiors, and calls for quick and decisive action in the battlefield. This factor assumes greater significance in view of the advances in weapon technology, and development of weapons with greater destructive power. Due to the enhanced pace of war, and also firepower, modern warfare has an irretrievable nature. Weapons once launched cannot be recalled and are certain to cause major destruction and also invite rapid retaliation.

Modern warfare has also witnessed an increase in the intensity of war and density in the battlefield, due to the proliferation of weapon platforms and the quantum of destructive power available. As a result, the battlefield environment has a larger number of crisis/action points. Military leadership in the battlefield has to cater to these crises at various centres. This would indicate a major shift from the traditional concept of centralised leadership towards decentralised leadership at the tactical level. The need for this is heightened by the increasing possibility of disruption of command, control and communication facilities by hostile electronic warfare, even for a few critical moments.

A tremendous responsibility thus resides with military leadership in the theatre of operations, mostly at fairly junior levels. They have to not only take a swift and independent decision, but it also has to be the correct decision as there would be no second chances. Any shortcomings in decision-making, i.e. an incorrect or even slow response, would invite disaster. Ironically, there is greater scope for error due to these limitations and greater scope for devastation due to improved weapon technologies.

This factor highlights another feature of modern military leadership. Due to technological advances, there has been an increase in the level of inanimate contribution to the fighting process. The human input has concomitantly decreased, giving rise to some illusions of reduction in the value of military leadership. While there is an apparent reduction in the value of this input in relative or statistical terms, it is important to note that due to this very reduction there is a greater dependence of the otherwise mechanical and largely unvariable fighting machine on the lesser, more unpredictable human input. Since the human share in the fighting process has reduced, there is a corresponding reduction in the margin for any human errors or their rectification. As a result, the human element has in fact assumed a critical value in absolute terms. Earlier, it took a series of errors by several people to create a military disaster. The famous Charge of the Light Brigade at Balaclava in 1854, during the Crimean War, is one such example. In modern warfare, due to its speed and irretrievable nature, a small error by a single person could result in a similar disaster, in a fraction of the time. In the USS *Stark* (1987) and USS *Vincennes* (1988) incidents, the human input was the smallest but most vital - i.e. the command decision on whether to open fire. In the few seconds available, one commanding officer held his fire while the other did not - and both split-second decisions resulted in disasters.

The technological/ operational environment has also changed existing tactics and doctrines, and thereby the role and scope of military leadership. Today, advances in technology have resulted in altering the force capabilities in the tactical environment. Minor technological developments could result in force multiplication capabilities, examples of which were the jerry can and aircraft drop tanks in World War II, resulting in a tremendous increase in the range of land and air power. The operationalisation of emerging technologies could alter the military balance today and cause a critical assymmetry of forces. Future analysts would attribute a modern Waterloo more to the laboratories of Eton than to its playing fields. In the modern environment, therefore, military leadership will have to give credence to the examination of techno-tactical doctrines, wherein it would be pushing technology to find tactical solutions. The leader's capacity to frame a successful plan must rely not only on the principles of war, but also on modern technology and its influence on these principles.

Advances in military technology and weapon systems have placed certain operational pressures on the military leadership. Due to the higher cost of modern weapon systems and the need to remain technologically abreast of potential adversaries, a lower number of these sophisticated, expensive weapon systems can be procured. This places pressure on the leadership, as any loss of weapon systems would constitute a heavy percentage loss in the defence

capability. There could be a concomitant hesitation to fully exploit these costly, sophisticated weapons in the face of risks, which could also lead to an increase in defence vulnerabilities. The art of decision-making, which is the hallmark of leadership, will thus be subjected to complex pressures and influences in the modern technological environment. A significant impact of the present environment on military leadership will be felt in the increasing need for effective and independent leadership at junior and younger levels.

LEADERSHIP AND YOUTH

The concept of de-centralised leadership, put to efficient use by the Germans in World War II, will provide the framework for modern leadership due to the changing nature and pace of war and the battlefield environment. The leader in the field today has both greater pressures to contend with, and lesser age or experience to rely upon. The military leader who commands a modern infantry or armoured regiment, a Rs 150 crore missile carrying ship or a Rs 640 crore air squadron of multi-role aircraft, will face pressures neither experienced nor envisaged by his forebears. The emerging socio-economic environment provides the psychological background for junior leadership which should be enhanced with requisite organisational restructuring and training programmes in the defence forces.

Greater opportunity for independent thought and action will have to be provided in peacetime at all levels, in order to adequately prepare the military leadership for the modern war scenario. Towards this end, the command structure may have to be revised in keeping with the soldier's psychological motivations and battlefield environment to enable younger officers to assume command.

In the American Civil War, 1861-65, the average age of the infantry regiment commander was 44.8 years at the start of the war, and reduced to 36.5 years by its end. The youngest commanders in the same war were 34 years and 25 years respectively. Since it was a longer war, this fall in age was natural over the course of the conflict as older commanders were killed, promoted or cashiered, and younger officers gained attention through combat performance. In the modern era, there are unlikely to be such long wars. Infact, except for the eight year long Iran-Iraq war, most wars in the post World War II era have been short duration, high intensity conflicts. Evidently, military leadership cannot rely today upon either experimental or purely seniority-based methods of promotion, and must adhere to a comprehensive selection system catering to the emerging paradigms of leadership.

Youth in command has a major role to play in modern military strategy. If ignored, it could even create significant vulnerabilities in the defence

system. At one level, there is a danger of capable young officers leaving the service due to an apparent lack of opportunity. In the modern socio-economic environment, there are already some disincentives to military life, some of which are inherent and unlikely to change significantly. Lack of opportunity or, in other words, the frustration of ambition-which is again enhanced due to the modern environment - could dissuade exactly the group of strong. aggressive individuals that the military should probably encourage. Our military forces might then lack the "fire" that these young commanders have. There is also a danger of the nation entering a war with officers who have crossed the threshold for providing dynamic leadership in the field, and who may still be fighting the last war.

In August, 1990, the fortnightly *India Today* published data on the existing age profile of commanding officers of Combat Arms (Battalions/Regiments) in the Indian Army. The following figures, extracted from the above account, are instructive and reflect the Army's reliance on older, more experienced officers in combat situations :

Arm	*Commanding Officer's Age Profile*		
	Average Age	*< 40 Years*	*42-44 Years*
Infantry	43.6 years	0.0025%	52.6%
Armoured Corps	43.2 years	Nil	66.7%
Mechanised Infantry	44.0 years	Nil	43.5%

It may be recalled that medical science also professes that a man's vitality reduces significantly after he has attained the age of 40 years. The Physical Proficiency Tests (PPT) designed for the defence forces are accordingly different and lighter for personnel beyond this age. Our degree of reliance on age and experience as a principal consideration for selecting military commanders should, therefore, be reviewed in the light of leadership imperatives in the modern environment. In the American Civil War, two hundred and thirty years ago, the average age of the infantry commander at the start of the war corresponds to the present age profile of commanding officers in the Indian Army. In sharp contrast, Napolean was appointed commander of the Army of Italy when he was 26 years old, and Alexander the Great died at the age of 33 years after conquering West Asia.

Due consideration must be given to the possibilities of younger leadership today. Young commanders probably tend to be less conservative, are more willing to try innovation, and are perhaps more likely to gamble. The ambition

of young officers can thus enhance the aggressive feeling of the organisation, filling it with greater fighting spirit.

In addition to seeking younger commanders, the role of leadership at more junior levels must also be recognised. The modern technological/operational environment demands quick and decisive action from the officer commanding a tank, artillery or infantry post, flying a sophisticated fighter aircraft, and controlling an anti-ship, anti-submarine or air defence weapon system. The battle is heavily dependent upon junior leadership today, which has only a few years of service to rely upon. Greater stress will, thus have to be placed on providing opportunities to junior officers for independent thinking and execution of plans, in order to prepare them for the crucial moments of decision-making in war.

Trends in Modern Leadership

The military leadership must be ready today for short warning, limited duration, high intensity conflicts, which would require a continuous, high state of war preparedness. However, pressures of the modern socio-economic environment have tended to act against this paradigm. There has been a resultant dichotomy between the imperatives of peacetime command and battlefield leadership. In times of peace, there is a natural proclivity in the defence forces for placing greater emphasis upon administrative excellence and strict adherence to staff rules and regulations. This is highlighted by the post World War II anecdote, wherein an infantry colonel reportedly stated, "Now that the war is over, we can get down to some serious soldiering". Due to the higher standards of professionalism today, this traditional misemphasis has also been enhanced and could lead to a mistake resulting in loss of command and/ or further promotion. Innovations, on the other hand, would not beget proportionate gains. In peacetime, therefore, avoidance of mistakes provides a more practical goal to the modern leader, and peacetime command advocates caution and a risk avoidance syndrome. Military leadership may possibly feel encouraged to shun initiative for fear of making mistakes, and concentrate on passive management in lieu of active leadership. This could give new dimension to the saying that, "the pen is mightier than the sword."

War, however, demands a different mettle of leadership. Boldness and initiative are imperative for success in war, and there is need for active leadership in the battlefield. War does not permit any mistakes either, but the consequences of failure go beyond the individual leader. It is an accepted fact that long periods of peace or inactivity could permit the military leadership to decay, and lose its fighting edge. The solution, however is not to have more wars. Infact, a strong military force and competent leadership would automati-

cally be a deterrent to hostile action. While in the past, wars were longer and slower and there was opportunity to revamp the leadership for battle, thereby giving rise to many a successful general, the nature and pace of war today will not permit such absorption of leadership failures. The modern environment precludes the luxury of maintaining dual leadership for peace and war and this possible, dangerous, dichotomy will have to be resolved by breaking out of the traditional distractions and placing emphasis on developing military commanders as warriors, rather than mere management executives.

Another trend in military leadership will be higher education. While it is an old and treasured saying that Waterloo was won on the playing fields of Eton, it is equally true that Colense (the shattering defeat at the hands of the Boers) was lost in her classrooms. The relation between leadership and education drawn by John Paul Jones in the last century is even more true in the modern era. In the face of advancing weapon technologies, and their impact on tactical and strategic doctrines, and the increasingly complex battlefield, the modern leader will have to rely upon higher education. There is no doubt that an educated officer is in a better position to integrate military skills with military requirements, and understand the consequences of military actions with their overarching political and social implications.

Education of officers at the basic level must accordingly be broad-based and aim to provide both, a set of cultural values and a sense of intellectual perspective. In their succeeding years, it should be enhanced by studies in combat skills and military strategy, national objectives and security environment, and the relation between them. It is instructive to note that Admiral Jim Crowe, former Chairman, US Joint Chiefs of Staff, has a double doctorate, pursued by him whilst in service. Similar consideration to the pursuit of higher education may be given by our military system. In this regard, Sir William Butler's statement may be recalled that, "The nation that will insist on drawing a broad line between the fighting man and the thinking man is likely to find its fighting done by fools and its thinking done by cowards."

In similar vein, the training system will have to ensure that it caters to the dynamics of modern leadership. There is a myth that a dichotomy exists between training and education, but Sir William Butler correctly identified education to be a component of training. In addition to providing better education, the training system will also have to stress upon the development of leadership. As mentioned earlier, in the modern social environment there are no inherent martial classes, and training commences within the military system. The areas requiring great care are the selection of officers with high leadership potential, and the development of this potential in accordance with the leadership imperatives in the modern battlefield, particularly the capacity for independent decision-making at junior levels.

The factor of junior leadership has been traditionally ignored since it did not have any significant role. Today, however, it is of critical importance and unless the junior officer is provided adequate opportunity for initiative and decision-making in peace time manoeuvres, and learning from his mistakes, he will be unable to bear the burden in war-with disastrous results. Training programmes exercising junior leadership must be given greater importance today, and war games at division and corps level must incorporate this factor in their inception and execution. Training and Education must also cater to future external pressures by the military leader, including handling of media.

While it is simplistic to say that higher leadership potential must be screened at the selection level, there is the fact that the modern socio-economic environment has promoted a diversion of otherwise capable military talent into other fields. Some possible disincentives of service life, in relation to the current social environment, cannot be ameliorated because of the same progressing environment. However, other challenges within the military, more compatible with the prevailing society, could be emphasised to retain the valuable military talent. Scope for initiative, junior leadership and younger command could be enhanced, to provide the twin edge for maintenance of competent leadership in future wars.

There has also been a trend in modern times for military leadership to gravitate towards modern management techniques. There is need for caution here, and it must be remembered that management is only one part of leadership. If the leader changes into a manager, then an essential component of leadership is being rejected. While modern management philosophies will no doubt prove of value in so far as the management and better employment of material is concerned, and even in the case of management of some conditions of the soldier, they are totally inadequate for dealing with combat situations - both in the framing of plans and in the persuasion of others to carry them out in the face of death. Management, while useful to the military leader, will remain subordinate to leadership and cannot substitute it.

CONCLUSION

Leadership has two components - knowing what to do, and getting it done. These two components are dependent upon the battlefield environment in which the appropriate plan is to be devised, and the socio-economic environment which governs the psychology of the soldier who will execute it. In the modern era, there have been significant changes in both these environments, thereby altering the dynamics of military leadership. At one level there is an ongoing dilution of military talent and martial instincts, and on the other

level there is a greater need than ever for the most competent military leadership. An appreciation of the imperatives of leadership in the present environment could help resolve possible dilemma.

Socio-economic changes and technological/operational imperatives have increased the value of training, necessitating in-depth and broad-based training and education of military leaders. The military system must accordingly exercise the greatest care in the selection of its instructors, who shall be the mentors of military leadership in future wars. Due to the nature of war today, and its relation to internal security issues and international affairs, there is a pressing need for bringing the military leadership closer to the national decision-making process, perhaps along the lines of the US Pentagon. The military leadership must also be prepared for its greater responsibilities and vulnerabilities in the modern environment.

In an address to the graduating class of the US Naval Academy in 1961, President JF Kennedy had aptly described the changing imperatives of military leadership : "Fifty years ago the graduates of the Naval Academy were expected to be seamen and leaders of men... Today, all of you must, of necessity, be prepared not only to handle a ship in a storm, or a landing party on the beach, but to make great determinations which affect the survival of this country... you must understand not only this country, but other countries. You must know something not only about strategy, tactics, logic and logistics, but also about economics, and politics and diplomacy and history. You must know everything you can about military power, and you must also understand the limits of military power."

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NOTE TO CONTRIBUTORS

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

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

Kashmir - Not Just Law and Order Problem

BRIG N B GRANT AVSM (Retd)

"You will not get a pair in Kashmir, but you are sure to get one in India", was the reply given to me by an optician in Srinagar for the replacement of a broken pair of Ray-ban glasses. He was not being rude or even cynical, but making a statement which is so common and comes so naturally in that State. Although not intentionally, but sub-consciously he was differentiating Kashmir from India, and it is a well known psychological fact that, whatever is in the sub-conscious, is usually the truth. It is therefore worth analysing the reasons why the average Kashmiri thinks that way.

Last year, when the US Asst Secretary of State, Robin Raphel in-charge of South Asia, to a question foolishly asked her by an Indian reporter, as to whether the US government regarded Kashmir as an integral part of India, answered by saying that, if for 30 years neither India nor Pakistan could normalise their relations even after the Shimla accord, the US could not but consider the whole of Kashmir as a disputed territory. Raphel was only stating a historical fact brought about by our own making.

To begin with, let us face the fact that, India was partitioned on a communal basis to create a separate homeland for Indian Muslims. However, as far as Kashmir was concerned, it was a Hindu maharaja ruling over a Muslim dominated State, who for his own personal security, signed the Instrument of Accession to join a Hindu dominated India. The Indian Army gave him that security, by ensuring that his Muslim subjects did not go over to neighbouring Muslim Pakistan.

Right from the word go, we have done everything under the sun to make the whole world believe that, Kashmir was not an integral part of India to the same extent as the other States were. To start off with, Sheikh Abdulla was installed in Kashmir as its first Prime Minister and not as another Chief Minister, thus placing him on par with the Prime Minister of India. This was following by a special status granted to Kashmir under Article 370 of the Constitution, to provide for its 'traditions' and 'susceptibilities' which were said to be peculiar to it.

We even allowed, and still do, the Srinagar radio station to identify itself

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as Radio Kashmir, and not as All India Radio, Srinagar, on the lines of all other radio stations in India. As if this was not bad enough, in the early stages, we went to the extent of allowing Kashmir to have a separate constitution, a separate flag, and also a separate anthem. Of course, the last straw which broke the proverbial camel's back, was, when we took the case to the UN, to clear our own doubts whether Kashmir was really a part of India. We agreed to a plebiscite to resolve this.

The question is, if as we now claim and take it for granted that, there has never been any doubt about the accession of Kashmir to India, then what was the need to do all the above, and in the process allowing our credibility to be suspect in the eyes of the entire world? Even at the expense of sounding unpatriotic, the specific question to be answered is, that if after 40 years of keeping Kashmir legally, constitutionally, and more so emotionally, separate from India, how can we still keep on harping on the inane and time worn cliche of Kashmir being an integral part of the Indian culture, ethos and its national life stream? Even during the Hazratbal siege, Dr Karan Singh had suggested that, any talks between India and Pakistan would be futile unless Kashmir State was also represented therein, thereby giving an impression of Kashmir and India being separate.

Ever since Independence, even at the expense of draining our own meagre economy, we kept on pouring crores of rupees in that Valley, in the hope that we could wean over its people to our side. We have waged three wars with Pakistan over it, and an entire Army formation is located there in a constant state of readiness. We have experimented with different political systems, and have changed governors gallore, in the hope of seeing even a small flicker of light in that Vale's dark tunnel, but so far there has not been even a glimmer of that hope. If anything, things have deteriorated even more so, and with the Hazratbal incident, it has become one of the most insecure land, not only in the country, but perhaps in the world.

So far, any other solution to the problem, like a plebiscite for instance, was taboo, and has even been considered unpatriotic and traitorous, due to the emotional attachments of the old Nehru-Gandhi clan to its ancestral abode in this Valley. Now that this family attachment is no longer there, one could venture, or if I may say dare, to get away from the beaten track and explore other avenues, even that of a plebiscite.

For how long are we going to pour money, resources and men into that Valley, which brings us nothing but insecurity, frustration, daily loss of lives and a constant drain on our faltering economy? We have got to solve this problem, not by asking what Pakistan or India wants, as we already know that answer, but, as Dr Karan Singh put it, by asking the Kashmiris as to what do they want? But then, it would require a national leader of the stature of a

Gorbachev, to be able to ask that question, even at the expense of losing his job.

Notwithstanding what Robin Raphel may have said and the mistakes we may have made in the past of unknowingly internationalising the issue, what is still not being realised either by the United States or India, is that, Pakistan is hell bent in making trouble in Kashmir, and is scrupulously following its long term plan 'Op Topac', formulated in December 1989 by the late Gen Zia for 'liberating' Kashmir. This plan, as is now common knowledge, envisages in phases, methods of combat, short of a direct military action, of a coordinated use of moral and physical means, which will destroy our Indian will to resist, damage our political capacity, and expose us to the world as an oppressor. The Plan emcompasses a low level insurgency so that the State is under a continuous siege. Secondly, to whip up anti-Indian feelings amongst students and peasants, preferably on some religious issues, like the current Hazratbal incident. Simultaneously, to exert maximum pressure on outlying sectors like Rajauri, Punch etc, to force the Indian army to deploy its reserve formations outside the main Valley. In the last stages, to attack and destroy our various depots and headquarters by covert action at a given time, to culminate in the final action of the 'liberation' of the Kashmir Valley. So far 'Op Topac' is dead on schedule. Surely it does not require a military mind to know this?

This , however, is not a new development, but has been going on since the end of the Bangladesh war. It is interesting to note that, in the past 2000 years of recorded history, there have been only 14 decisive battles in the world, of which the Bangladesh War was the fourteenth. Ever since, the cadets in Pakistan's military academy at Kakul, swear a daily oath that, one day they will avenge Bangladesh.

We can no longer view the growing unrest in Kashmir as another law and order problem. A special kind of war has been initiated by Pakistan in Kashmir, no different from what is prevailing in Bosnia or Georgia, and even Raphel knows this. Today, Kashmir figures very high in the present Prime Minister, Benazir Bhutto's priorities, and Pakistan's support to secessionist terrorism in Kashmir will remain an integral part of her strategy fanned by a subdued US diplomacy. If the Indian government does not wish to abandon the Valley, irrespective of the cost of men and material involved, and in spite of the external political pressures and sanction which may be imposed on her, then, short of settling the problem on the existing L of C, ie 'where is, as is' basis (as today is the fait accompli case with China), there does not now seem to be another alternative but to opt for a military decision. We must not, however, allow Pakistan to force us to do this at a time and place of her own choosing; the initiative must rest with us. Whether our present leadership is capable of grasping this and acting in time without dithering, is the $ 64,000 question. But by then, it may be too late.

Myanmar - Future Challenges: Is India Prepared to Face These ?

MAJ GEN V K MADHOK AVSM (RETD)

Myanmar faces several interesting problems in the immediate and distant future, the roots of which lie in its military's ambition to retain its supremacy. As a result, on top of the list is Madame Suu Kyi herself. She continues to remain the chief obstacle to SLORC's (The State Law and Order Restoration Council) future programmes and ambitions. And from amongst the remaining issues one could choose and include; the continuing insurgency and pro-democracy movements inside Myanmar, the threat of an election under international or UN supervision, redrafting of the constitution to enable the military to retain its tight grip on the country, foreign pressures and stern criticism of Junta's record of human rights violations. Accordingly, the Junta is caught see-sawing in the process of crucial decisions it must make to meet these challenges. With a 1643 km long Indo-Myanmar border running along the sensitive states of Arunachal Pradesh, Nagaland, Manipur and Mizoram, what happens inside Myanmar equally affects India.

Madame Suu Kyi has completed a five year internment in July 1994. Now the SLORC has to decide whether to charge sheet and rearrest her or to release her. Although the guards at her residence have been reduced and she has been given more freedom alongwith an option to leave Myanmar for good, but she would rather stay in Myanmar and be considered a patriot then earn her freedom by going into exile. The sympathy of the outside world clearly lies with her, the winner of 1991 Nobel prize for peace. Since then, the other Nobel prize winners have met in Bangkok in February 1993 and made a fervent appeal for her release. In case the SLORC releases her and lets her stay on in the country, she will once again, become the focus of a pro-democracy movement, which the Junta may fail to contain. And therefore, this issue remains Junta's genuine worry.

On the other hand, the SLORC has been becoming stronger. With a state controlled media and stringent laws, atleast on the surface, it has better control over the country. In addition, foreign aid has been coming and Thai, Japanese and European businessmen are investing and trying to establish hotels and other joint ventures in the country and the areas adjacent to the Golden

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Triangle. Myanmarese armed forces too have been expanding with Chinese help. And massive arms suppplies have been pouring in from Beijing in accordance with a Sino-Myanmar arms agreement signed in 1989. The Army will touch a half a million mark by 1995.

But there have been desertions too. In August 1993, eleven soldiers deserted from the Myanmar Army near Manipur. They were provided shelter by Manipur students. This was the first instance of its kind after the 1988 pro-democracy uprising. It could have been dismissed as trivial or as a routine isolated incident provided there was less secrecy about Myanmar and there was free flow of information to the outside world. Since it is'nt so, one cannot entirely rule out the occurence of such type of incidents in the future.

All this does not give international respectability or credibility to the SLORC which it has been seeking for such a long time. Concurrently, Madame Suu Kyi cannot come into power without free and fair elections. Which in turn cannot be held without international and superpower support. Therefore, towards that end, the personal letter by President Clinton to Madam Suu Kyi, which was delivered by the American Ambassador to her recently and which promises full support to her is significant.

The situation in Myanmar indicates the types of issues which the US foreign policy has tasked itself to tackle. These being: human rights violations, combating drug and narcotic traffic, encouraging and establishing those regimes which are sympathetic to US foreign policy goals. The Amnesty International report released on October 10, 1993 says that life in Myanmar is characterised by fear, intimidation and wide spread human rights violations. So far as drugs and narcotics are concerned, Myanmar remains the largest producer of opium in the world. This, and other narcotics are being smuggled all over Asia, Europe and the US.

The Americans are in the process of crystalising their policies in South Asia and there are sufficient reasons that Myanmar would form an important part of it. Therefore, in the coming months, it is logical to assume that US will launch initiatives to tackle various issues in Myanmar specially those which concern the restoration of democracy. To start with-at an appropriate time, alongwith other Nobel prize laureates and their countries there would be immediate pressure to release Suu Kyi to let her stay within the country and to permit her to campaign for elections. And when that is done, to canvass for elections under UN supervision and to abide by the verdict of the people. This can be a tricky situation for the SLORC, but that appears to be its fate.

However, the SLORC has embarked on a plan to pre-empt all this by

redrafting the constitution for which a convention was called in January 1994. The aim is to ensure that the military will have and will retain a major say in running the country. With this in view the elections can be delayed on one pretext or the other. On the other hand, should an elected, democratic government come into power, under a popular leader like Suu Kyi, it might scrap the constitution drafted under the military regime.

So far as insurgency is concerned, the Karens, Chins, Kachins, Shans, Kayas, and many more continue to agitate for independent states. Although some efforts have been made by China and Thailand to persuade the Kachins and Karens respectively to negotiate with the SLORC for a settlement, no concrete results have been achieved so far, nor is there any hope for a final resolution of their problems.

India's past record of its relations with Myanmar cannot boast of any positive initiatives with its neighbour. After Rajiv Gandhi's visit in the late 1980s, the only high dignatory who visited Myanmar was India's Foreign Secretary and that too for two days towards the end of March 1993. And now, the Indian COAS, Gen Joshi has paid a four day visit to that country on May 9, 1994.

During Rajiv Gandhi's visit, a proposal to have more cooperation at the Indo-Myanmar border between the neighbouring armed forces-strictly at the professional level, was mooted. This made sense and was in any case a good start point. But it has not been followed up. Accordingly, majority of the current problems, such as the illicit drug trade and specially its effects on the Manipur youth, the current activities of NSCN(K)-the Burmese Nagas, towards conversion of tribals in Arunachal Pradesh which have come in for much flak in the media, provision of training bases and other support to ULFA across the border inside Myanmar, smuggling of arms inside Mizoram and a host of other connected activities could have been nipped in the bud, had this cooperation taken place. Whatever is being done today such as to establish relations and to legalise trade across the border by recognising four trading posts in Arunachal Pradesh, Manipur and Mizoram has come a bit too late in the day.

Myanmar has once again become a member of the NAM which it had left in 1979. It has deliberately kept itself isolated, but this may not be possible in the future in view of the growing pressure which it will have to face for restoration of democracy and release of Suu Kyi.

India has some major stakes in the Northeast. For one, Pakistan's ISI is busy trying to bring in various secessionist movements such as the ULFA,NSCN, Bodos, PLA of Manipur and others on a single platform under the Liberation

Front of Seven Sisters with its main headquarters at Kathmandu. In view of the definite tilt towards China and Pakistan by Rangoon, it is important that the ISI does not succeed in establishing a similar headquarters inside Myanmar. And therefore, every effort has to be made to ensure that the Indo-Myanmar border remains secure. Even though the SLORC remains sceptical of India's pro-democracy stance, there is no reason why India should not launch a major foreign policy thrust to ensure the security of its eastern strategic flank?

Myanmar has today reached a stage where it has become ripe for a number of problem areas. The possibilities vary from an internal strife within the Junta to a coup led by pro-democracy elements with the help of insurgents to oust the SLORC and imminent US initiatives in support of Suu Kyi. And for which India cannot afford to be caught off guard.

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The National Military Strategy of the United States : A Critical Assessment

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INTRODUCTION

Following the collapse of the Soviet Union, the United States faces unprecedented challenges in its foreign policy and international relations. The unifying force provided by the fear of Communist expansion has been removed with no suitable substitute emerging. This has produced an aimlessness in American policy, as our national leaders attempt to identify an appropriate role for the United States in this new international environment.

One very critical area in the reassessment of America's international role is that of national military strategy. Military strategy and the availability of military assets ultimately underlie diplomatic activity and international relations. The threat of or the actual use of military force provides the teeth for foreign policy initiatives. The United States has developed a framework for the design and use of military force in the post-Cold War era in a document entitled, National Military Strategy of the United States.[1] This document describes a number of missions appropriate for American military forces as well as develops a model for the creation of smaller, more mobile armed services. It discusses a base force concept which currently serves as a leading guideline for force planning.

In this essay, we will attempt to accomplish three objectives. The first is to provide a brief review of America's current military strategy and its implications for force planning. Second, we will discuss some of the criticisms of this strategy as they focus on the configuration of American military assets. Lastly, we will discuss several alternatives to that presently suggested by our national military strategy for the design of American armed forces.

CURRENT NATIONAL MILITARY STRATEGY

Our current national military strategy is an effort by the Department of Defense to respond to a dramatically altered security environment resulting from the fragmentation of the Soviet Union. It also reflects the reduced

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budgets imposed by a Congress eager to respond to a lingering recession and unfulfilled domestic needs. Because the threat of a major war with the Soviets has vanished, American military forces will become smaller and have less need for a global warfighting capacity. With numerically smaller forces, interservice cooperation and joint operations will be emphasized in order to maintain mission capability.

In the new alignment of nations, both the nature and kind of military operations will change. Although the United States will retain the capacity for unilateral action, greater importance will be placed on regional alliances. Increasingly, military action will require the assembly of an international coalition before being launched. Moreover, our national military strategy explicitly describes a number of other missions for the armed forces, which had been previously deemphasized. These include international peacekeeping efforts, drug interdiction and humanitarian assistance. Each of these non-traditional missions contain implications for the design and equipping of the armed forces.

The current military strategy rests upon four major concepts: strategic deterrence, forward presence, crisis response and reconstitution. Although each influences the planning process for total force configuration, we believe the most critical concepts are crisis response and forward presence.[2] Forward presence addresses the extent to which troops are deployed or visible in potential "hot-spots" prior to the actual outbreak of conflict.[3] Obviously, forward presence is costly and requires an overall higher level of troop strength. Crisis response is the ability to transport meaningful numbers of troops and quantities of material to a critical region in a timely manner. With less forward presence, an increasing emphasis will be placed on crisis response capability.

The proposed design of American military forces under the new national military strategy will reflect these foundation concepts. Strategic forces will provide protection and deterrence against nuclear attack. The Pacific and Atlantic forces will serve as the source for forward presence. Contingency Forces will function as a strategic reserve, available for crisis response.

Criticisms of the National Military Strategy

Criticisms of the national military strategy have centered around two major concerns. The first focuses on the uniform shrinkage of service budgets contained in this approach. Critics argue that the present national military strategy does not sufficiently discriminate across services in allocating budget reductions; the current strategy imposes a kind of budgetary socialism.[4] They further argue that the new international environment has caused the value of

each individual service's mission to change and that should be reflected in funding levels.

The second criticism addresses the essentially transitory nature of this strategy. It contends that this version of national military strategy is only an intermediate stage until the United States can establish a network of regional alliances. Proponents of this view believe that such an alliance system will gradually evolve, much like the efforts to contain Communism following the Second World War. Consequently, they caution that there are important regional differences in the ability of American crisis response forces to unilaterally intervene and defend vital national interests.

A. Uniform Shrinkage

As previously noted, criticism has been directed at current national military strategy as producing military forces that have been uniformly reduced in response to a diminished Soviet threat. The resultant force structure has been termed, "old wine in new (and smaller bottles)"[5]. By implication, the force structure is imbalanced for its roles in the new international environment.

This forces imbalance can be remedied through a program of differentially allocating budget reductions based upon the importance of each service's mission. The collapse of the central European Communist threat has reduced the value of deep strike aircraft and heavy armoured divisions. Mobility and air/sea lift capacity have correspondingly increased in value. Existing military forces have to be redesigned or funds reallocated to those services best able to provide the needed capabilities.

Through a uniform rather than a selective shrinkage, we also fail to address the problem of asset duplication. Across-the-board reductions fail to encourage asset consolidation or specialization, as each service continues to maintain its relative share of the budget.[6] This reduces overall national military efficiency and produces problems in the execution of combined service operations. This is an especially critical shortcoming, given the current emphasis on jointness in military planning.

B. Transition Strategy

Criticism has also been aimed at the national military strategy, contending that it does not sufficiently recognize its own transitory nature. That is, the national military strategy as expressed by the Joint Chiefs is adequate only until the United States can establish a viable network of regional alliances. Since the new security environment can probably be best characterized as

multipolar, a variety of alliances will best serve our security requirements. Such a system of treaties and mutual-aid alliances offers the potential for a greater degree of security than the deployment of a response force after a crisis has already begun. Thus we believe that the present national military strategy will evolve from a reliance on forward presence supported by crisis response forces to a network of international alliances strengthened by diplomatic and political activity.[7] This more mature military strategy offers an enhanced national security and a greater stability in international relations.

With the transformation of international relations from a bipolar to a multi-polar orientation, issues of regional conflict and stability have become paramount. Yet we believe that the current national military strategy does not adequately consider the tremendous differences that exist across regions. Meaningful forward presence, for instance may simply not be possible in the Mideast. Moreover there are trade-offs possible for the various factors of national military strategy. For example, a more substantial forward presence can substitute for the slower deployment of crisis response troops. Thus the value of these contingency forces can vary across regions.[8] We do not feel that this differential has been adequately captured in the current formulation of national military strategy.

ALTERNATIVES FOR FORCE PLANNING

There exist a number of different conceptual approaches for the design of an optimal force configuration.[9] In this section we will critically examine three of these approaches. Although each approach contains elements of merit, not all are equally suitable for the security environment of the immediate post-Cold War era.

A. Across-the-Board Reductions

We have already briefly discussed a uniform reduction approach since it represents the choice implicitly adopted for force structuring in the Joint Chiefs' national military strategy formulation. There are limited advantages to such an approach. In the highly unstable international order of the 1990's, uniform shrinkage allows a certain hedging by retaining capacity in all the services. By failing to tilt our military capabilities in one direction through force tailoring, we maintain the ability to respond across a number of threats. Thus we avoid the risk of prematurely altering our force structure without clearly identifying the threat. Moreover, it has the advantage of simplified decision-making, since all services will suffer equally. Destructive and inefficient inter-service rivalries can also be reduced through such budgeting methods.

Yet, we believe that the negatives to this approach far outweigh the

merits. The critical limitation of uniform shrinkage is that such an approach responds adequately to the diminished Communist threat, but fails to fully consider the revised force structure needed to respond to the new threats arising from the Soviet retreat. Like a manufacturer that fails to recognize changes in consumer tastes or demographics and is left with an obsolete inventory, the United States may find its forces incapable of defending vital interests abroad.

We believe that a uniform reduction across the services, driven by Soviet military downscaling to arrive at a base force level is not the optimal method for force structure determination. Such a methodology fails to consider the different service capabilities and their varying importance in the post-Cold War period. Any approach for the design of American military forces needs to allow for the possibility of differential budget allocations across services, based upon considerations of national strategy. The following approach does contain this element.

B. Threat-Based Development

A threat based approach to force planning is one driven by external factors. Specifically, the identified threats shape the configuration of the military forces. It is like a football coach that tailors his defense to key on a particular high scoring running back or receiver. The major scoring threat is identified and the defense is then designed for its containment. The major threat will drive the force structure planning process and accounts for the ultimate product.

There are a number of advantages to such an approach. As observed in the previous section, threat-based planning allows for differential budget allocations across the services. The threat itself suggests which capabilities are most needed for its containment or defeat. Perhaps most importantly, it forces the decision maker to identify which powers have the potential to threaten American interests. It requires a careful analysis of world conditions and trends. If a threat is ignored, the result can be inadequate forces to meet the crisis or the possibility of military defeat.[10] The implementation of such an approach can provide relatively specific guidelines regarding the composition of military forces. Since we can quantify the military capabilities of individual threats, we can likewise estimate the American forces necessary to defeat them. Aspin's "Iraqi equivalent" calculations are one such technique.[11]

There are certain drawbacks with the adoption of threat-based planning. The resultant force structure will be obviously threat-specific. If threats change, the force structure will require modification. Indeed, this is the problem that

force planners face today as the once dominant Soviet threat recedes. Moreover, a threat-based designed military may possess only partial capacity to respond to a new or previously unidentified threat. To continue our earlier analogy, if a football coach has designed a defense to control his opponent's running game, a shift to a passing game by the opposing team may earn it victory.

But probably the most significant limitation of this approach is its weak linkage with national policy and the identification of vital national interests. Threats are identified in this method without full consideration of their impact on national interests. Forces should be structured to defend a vital interest, not simply defeat an enemy. The difference, though subtle is critical. It is the difference between means (defeating an enemy) and an end (the defense of a nationally vital interest). One of the coach's objectives is the defense of his goal line; sacking the opposing quarterback is a means to that end, but is not the objective per se. Thus we believe that threat-based planning only weakly joins strategy with policy and contains the potential for confusion between means and ends in the execution of American international policy. The following approach, which is interest-driven provides a greater coherence between strategy and policy in the design of American military force structure.

C. *Interest-Driven Planning*

Interest based planning requires that we design our force structure for the preservation of our vital national linterests. It is a proactive approach to force planning, viewing the military services as an active instrument in the defense and expansion of our national interests. In this decade, the policy imperative will be the creation of a new world order, characterized by economic interdependence, regional stability and control of advanced weapon proliferation. The identification of specific national threats occurs only in relation to their impact on these policy concerns. The "peacetime engagement" of military forces under this policy approach permits a more comprehensive role for the armed services than does a threat-based modelling.

Since the military services are ultimately shaped in relation to American vital interests, with this approach, we believe that it is more robust to changes in the relative power and orientation of individual nation states. Although American interests will exhibit an intertemporal variability, it will be much less than that of the threat capacity of specific nations. We believe that a vital interest based planning will produce a force best able to maximize the security of the United States in the post-Cold War environment.

Such an approach will integrate policy and strategy to a greater degree than either of the other two alternatives. Consequently the effectiveness of American foreign policy will increase and the United States will enjoy greater security and prosperity. Moreover, this method will allow for a wide range of funding in various service budgets. The force structure will not be tied to parochial service desires, but rather by what is required to protect vital national interests. Those interests will implicitly dictate the type of forces required for their defense.

CONCLUSION

As we enter further into the uncharted waters of the post-Soviet world, the importance of an adequate and capable military force increases. The objective of this analysis has been to review how best to achieve that design, given the existence of a national military strategy white paper. The current military position on force structure has been to uniformly shrink the various services in response to the decrease in Soviet military capacity. We contend that such an approach is inadequate for the new international order that is evolving from the global collapse of Communism.

The American military establishment must be redesigned to reflect the realities of a single superpower world: regional alliances, economic interdependence, ethnic and religious conflicts and the specter of nuclear weapons used as political bargaining chips.

A threat based calculus of force structure will only imperfectly capture these realities. Threat-based calculations focus on individual nation states. We believe that American national security will best be protected in the new international order by a higher order of analysis that begins with a policy examination of vital national interests. By strengthening the linkage between policy and strategy, we insure that the military assets in place will be sufficient to accomplish the policy objectives assigned to them. To do otherwise is to risk either political failure or military defeat.

NOTES

1. Colin L. Powell, "The National Military Strategy of the United States," Washington, D.C.: Joint Chiefs of Staff, 1992.

2. With the collapse of the Soviet Union, the risk of nuclear war has declined significantly. The greater risk now is that of conventional war in a number of unstable regions. Although some minimum strategic capacity will be retained, the object of greatest Congressional scrutiny will be troop and conventional weapon strength. Thus the concept of strategic deterrence is less critical to the force planning process.

Likewise, reconstitution is a lower order concern in the design of our force structure for the 1990s. Reconstitution involves our ability to extend national warfighting capacity to a global scale. Given our position as the sole remaining superpower and the increase in regional instability, global warfare should not be a primary concern in DoD funding decisions.

3. Powell has also included periodic and rotational deployments, access and storage agreements, combined exercises, security and humanitarian assistance, port visits and military-to-military contacts as other elements in his definition of forward presence.

4. Owens (1992) notes that each of the services continues to receive about one-third of the defense budget and that the force reductions contained in the national military strategy's base force structure are shared equally across military departments.

5. Owens, p.6.

6. Uniform budget increases/reductions tend to reduce innovation and creativity in business organizations since there is no incentive for risk-taking, the sine qua non of invention. We believe that there is an optimal amount of inter-service competition necessary to achieve a maximal defense posture for a given level of expenditures. In the absence of this competition, (generated by differential budget allocation) the services function as an oligopoly, with many of the inefficiencies documented for such an organization of economic activity.

7. Some authors, such as Wood (1992) refer to this development as collective security. A collective security arrangement moves away from a threat-based coalition (e.g. NATO) and designs an alliance around political independence, territorial integrity and peaceful change.

8. Anderson, (1992) has suggested that the Crisis Response Force described in the Joint Chiefs' national military strategy will be unable to respond in a timely fashion to a Mideast crisis. He proposes a naval bridge of pre-positioned maritime forces and forward deployed amphibious forces as a substitute strategy in this highly volatile, but vital region.

9. Barnett and Gaffney (1993) for instance develop three different models for current defense strategy and force structure. Their first model is one of Transition and envisions the United States as a beat cop, deterring crime and promoting peace. The Navy and Marine Corps are emphasized in this approach. The second model is the Big Stick and employs a SWAT-team analogy. This vision concentrates on Army and Air Force capabilities. Their third model is Cold War, and sees the United States as a kind of Lone Ranger, armed with "small, high-tech silver bullet forces."

10. Indeed some scholars believe that it was Acheson's failure to include Korea in a speech describing the extent of American interests that encouraged the invasion of South Korea by the North in June, 1950.

11. Aspin's benchmark approach is not without flaws, and focuses solely on numerical strength to the exclusion of other factors (e.g. quality of troops, leadership ability, morale factors, logistics support). Nevertheless, we find it a useful calculation and is comparable in concept to the use of indices in economics and finance (e.g. CPI, S&P 500, Dow Jones Industrial Average) to measure aggregate economic performance.

Anti-Computer Electronic Warfare

LT CDR VW KARVE

INTRODUCTION

The very usefulness of the computer brings with it the penalty of dependence. With the near universal use of computers in almost every domain of military operations, the military machine is moving towards a total dependence on the availability of computer systems. The relevance of computers in defence applications has become so pervasive that, in many instances, modern military organisations may be rendered impotent if denied the use of their electronic and computer systems. This increased reliance and dependence on computers is no panacea - in fact, over-reliance may result in vulnerability to exploitation. This suggests that a productive line of research may be in the development of anti-computer weapons. Perhaps the area to give the greatest return will be the exploitation of the adversary's reliance and dependence on computers.

A weapon that disables electronic computer systems is an attractive concept. Modern weapon and communication systems extensively employ computers for command, control and guidance. Anti-computer weapons hold considerable promise of causing disruption along a broad spectrum, with various hostile weapons and equipment incorporating or associated with computers being disabled or rendered ineffective.

The consequences could be disastrous, particularly in mission-critical, security-critical and safety-critical systems.

RECENT TECHNOLOGICAL DEVELOPMENTS

HIGH-POWER MICROWAVE (HPM)

Considerable attention has been focussed recently in the area of anti-computer weapons. Reports indicate that research is in an advanced stage in both Russia and the USA in the evolution of High Power Microwave (HPM) as a potential anti-computer weapon[1]. In all probability, early versions of HPM weapons may have already been developed and even fielded. One report mentions that during the 1991 Gulf War, US forces used non-nuclear electro-

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magnetic radiation-emitting devices that disrupted Iraqi electronic systems with similar effects to those of atomic weapons[2]. This points to an HPM device, causing effects characteristic of and similar to an Electromagnetic Pulse (EMP).

COMPUTER VIRUS COUNTERMEASURES (CVCM)

Another emerging Electronic Warfare (EW) technology is Computer Virus Countermeasures (CVCM)[3]. It has been reported that a computer virus gun, capable of remotely injecting computer viruses into enemy computer systems, is under development[4]. This is the way this technology would work. A remote virus weapon could penetrate onboard computers on a tactical jet aircraft. It could cause a temporary or, for that matter, a permanent upset of flight controls and weapon systems. The pilot could lose control of his aircraft, and the virus might cause his weapons to be released prematurely. A computer virus gun could be effectively used to neutralize almost any hostile weapon platform/- system or Command, Control and Communications (C^3) System. While few detail are available on the virus gun, much is known about computer viruses. It may be inferred, that probably HPM technology is likely to be utilised for coupling and penetration of computer viruses into victim systems, with devastating effect on software.

ELECTRONIC WARFARE (EW) CONCEPTS

The three vulnerable entities in the victim computer systems that can be targetted are hardware, software and information (or data). These may be targetted, either independently or in concert, in accordance with certain Electronic Warfare (EW) concepts, employing appropriate Electronic Countermeasures (ECM) techniques in an optimal manner in order to achieve the desired results.

ECM OBJECTIVES

The key features of ECM are disruption and deception. As a result of experientially evolved concepts[5], ECM missions are conducted relative to one or more of the following basic ECM operational objectives:-

(a) Dilute the efficacy of enemy electronic and C^3 systems by swamping his information handling capacity - overload or saturate the data processing and operational capability of victim systems to deny accuracy and speed.

(b) Degrade the performance of victim systems by introducing or inserting false deceptive data with a view to generating ineffective responses and confuse enemy personnel, weapons and C^3 systems.

(c) Destroy, or disrupt, hostile electronic systems in order to deny hostile forces the use of key elements of their Command, Control and Communication (C^3) structure and associated networks and weapons.

(d) Intimidate the adversary. Intimidation is a psychological concept that relies on a demonstrated capability to destroy the adversary's weapon, C^3 and electronic systems. The objective of intimidation is to induce fear and deter or inhibit the adversary in using his C^3 and weapon systems. Deterrence depends very much on psychological as well as technical factors. To be credible, the threat of retaliation should demonstrate a visible technological supremacy and ability supported by the undoubted determination to use it.

DISRUPTION AND DECEPTION

The *sine qua non* for successful ECM is the symbiosis of ECM concepts, tactics and techniques feasible from modern technological developments. The ECM tactics to implement the above concepts may be broadly classified under the generic terms disruption and deception. Disruption is an overt ECM tactic with the aim of destroying, or causing damage to, the victim systems's hardware, software and/or information (data).

Deception is a covert and subtle tactics with the malicious intent of misleading or confusing the enemy's (or victim system's) perception of the threats or tactical environment. In deception, the aim is to exploit the adversary's vulnerability of falling victim to the phenomenon known as the Ultra-Syndrome[6] when one becomes overly reliant on a source that has proved to be extremely reliable and accurate in the past. With the proliferation and increased reliance on computer based weapons, C^3 and electronic combat systems, deception techniques may have a profound effect and shall pay handsome dividends. Deception tactics and techniques may be categorised under two major heads.[7]

(a) Ambiguity-increasing or "A-type"

(b) Misleading or "M-type".

The "A-type" variant aims at confusing the enemy by increasing ambiguity leading to delays and reduced accuracies in the enemy's computer processing systems. This deception tactics is consonant with the ECM concept of dilution..

"M-type" deception aims at misleading the adversary by reducing ambiguity and projecting a false perception by building up the attractiveness

of one wrong alternative. This tactics correlates with the ECM concept of degradation.

IMPLEMENTATION TECHNIQUES

In the context of computer countermeasures, the target set (vulnerable entities) comprises:-

(a) Hardware

(b) Software

(c) Information

Hardware is susceptible to a wide range of physical and logical countermeasures which may affect any item of sophisticated electronics. Software is that component of a computer system which renders life to it and controls all its operations. It is a highly valuable and vulnerable asset. Information is the end-product of a computer system, and is perhaps the most crucial entity in a system. Information, in a computer system, is vulnerable to more subtle risks. Viable computer countermeasures entail targetting the vulnerable entities (of the target set), independently or in concert, using techniques derived from the state-of-the art technologies of HPM, CVCM and hybrid applications and combinations of the two. The spectrum of computer countermeasures is explored in the succeeding paragraphs.

THE EVOLUTION OF HPM

The introduction of Radar in World War II, and subsequent developments in military communications, gave an impetus to microwave technology. Further research led to the development of devices capable of generating higher power outputs and higher frequencies. Single device peak power outputs of 15 Gigawatts and above have been reported[8]. The advent of "smart" and "brilliant" weapon systems that utilise highly sophisticated electronic computer systems - has brought with it serious technological dilemmas, such as how to counter these increasingly effective electronic weapons. One of the most effective answers has come from one technological source; high-power microwave (HPM). Evolution of HPM energy as a potential weapon stemmed in part from recognition of the destructive potential of nuclear Electro Magnetic Pulse (EMP). As early as the 1950's, as a result of the Fishbowl series of nuclear tests in the Pacific, EMP and its capability to damage electronic systems was identified[9]. This led to the initiation of the development of HPM weapons and recognition of HPM as a viable ECM technique[10]. HPM is generally considered to be microwave radiation at powers above a gigawatt within

the normal microwave frequencies of 1 to 30 GHz, and causes non-nuclear EMP effects on electronics. In 1988, a war game experiment was conducted at Waterways Experiment Station (US Army Laboratory Command) to examine the impact of emerging technologies on future war fighting. One of the clear winning technologies was High Power Microwave (HPM). The finding was that "remotely operated HPM systems appeared to offer the potential of significantly suppressing enemy Command, Control, Communications and intelligence (C^3I) in the combat area"[11].

HPM EFFECTS

HPM radiation has two general effects[12] :-

(a) the "scrambling" of electronics to temporarily confuse or blind computer systems - cause a momentary disruption, logic fault or information error at a critical moment and leave no trace thereafter, and

(b) "terminal burnout" or permanent destruction/functional damage to susceptible electronic components of computer systems, thereby permanently disabling the system.

HPM may also be used as a via media carrier for intermodulation of spurious signals with malicious intent into victim systems; eg, remote insertion of computer viruses into enemy systems - the virus gun concept. The strength of all these effects will depend on the type of the target. HPM effects would be enhanced by materials that tend to absorb microwaves, such as Radar Absorbing Materials (RAM), aimed at reducing the Radar Cross Section (RCS), that play a role in the "Stealth" aircraft designed to be invisible to radar[13]. Thus, HPM may be an attractive option against stealth technology.

The economics of large scale integrated circuits has produced a proliferation of computer control and digital electronic systems. The increase in integrated circuit density has motivated reductions in operating levels and power-per-operation to limit heat dissipation and increase efficiency. These lower operating levels lead to increased sensitivity and vulnerability to HPM. In addition, because digital circuits operate on trains of triggered logical state changes, they are susceptible to transient interference ie, momentary disruption or scrambling of electronics or functional upset. The faster the operating speed - the more the susceptibility and effect. A single transient (induced by HPM) can produce an error that seriously degrades system performance.

Simultaneously with the increasing sensitivity to transients and proliferation of digital integrated circuits has come an evolution in structures and product packaging that has replaced metal with plastics and other non-metallic

composites. Thus as metal has been superseded by carbon-epoxy composite aircraft skins and moulded plastic housings, the inherent shielding provided by aluminium skins and sheet-metal or die-cast equipment housings has been virtually lost. The increasing tendency to use non-metallic materials, for economic and techno-operational reasons, is also a feasibility factor for HPM. Thus, HPM is a viable technology for implementing the ECM operational objectives of dilution, degradation, destruction and, consequently intimidation. These aspects are discussed in succeeding paragraphs.

Terminal Burnout

Permanent destruction of digital electronics and microprocessors may be caused by high-intensity HPM due to the phenomenon of ablative shock[14] induced by thermal overstress. Ablative shock occurs due to the generation of a mechanical shock wave at the surface of an object exposed to intense, pulsed electromagnetic radiation such as HPM. A thin layer of the object's surface rapidly boils off; the resulting vapour exerts pressure against the surface, generating a mechanical shock wave. This wave then propagates deeper into the object and can cause melting, vapourisation, and spallation of surface material, and structural failure of the object. This phenomenon requires relatively high power HPM and permanently disables the victim systems.

Functional Upset

A desirable characteristic, from the deception point of view, may be to cause a momentary logical malfunction, with malicious intent, to dilute, degrade or disrupt system performance at a critical juncture, and leave no trace thereafter. It requires relatively lower power levels and shorter durations of HPM to upset or interfere with computer memories, processors and logic devices and circuits causing serious consequences without the victim realising it until it is too late for corrective action[15]. This is a type of "soft-kill" ECM technique.

Functional upset refers to the drastic alteration of a digital computer (logic) circuit's normal operating condition, thereby resulting in significant changes in the logical output. Advanced Very Large Scale Integration (VLSI) and Very High Speed Integrated Circuits (VHSIC) digital devices have shown to be highly susceptible to functional upset owing to HPM[16]. The devices, which are widely used in defence applications, utilise submicron dimensions and operate at fast clock rates and low logic levels. As clock rates increase and device dimensions and logic levels decrease, device sensitivity to HPM increases. A few examples of the detrimental effects produced by functional upsets are given in Table I below[17]:

TABLE 1

DIGITAL COMPUTER CIRCUIT UPSETS

	FUNCTIONAL EFFECT	PRODUCED BY UPSET OF
1.	Changes in Command functions	Flip Flops, discrete circuits
2.	Alteration of stored information	Registers, memory elements
3.	Changes in system timing	clocks, counters, oscillators
4.	Changes in system timing	logic buffers, interface circuits
5.	Changes in processing states	Non-synchronous states

In order to highlight the consequences of functional upset on security-critical, safety-critical and mission-critical systems, it may be pertinent to cite an example from the 1991 Gulf War. It has been analysed[18] that a clock-drift in a Patriot missile system computer resulted in a tracking error of 678 metres resulting in Patriot missiles failing to intercept an incoming Scud missile that hit American military barracks in Dhahran. Though this functional upset (of the type at Sl. 3 of Table I) occurred due to environmental factors, this example illustrates the extent of system performance degradation feasible if similar effects could be achieved using HPM techniques.

Unlike conventional munitions, HPM weapons do no obvious physical external damage to their targets and can be employed without warning. Reports indicate that several scenarios to study the viability of HPM weapons have been developed and analysed[19]. It is apparent that insofar as the USA and Russia are concerned, research into HPM is at an advanced stage and first generation HPM weapons have already been developed[20]. A unique source of high-power long-pulse HPM called the plasma-assisted slow-wave oscillator (PASOTRON) has been developed by scientists at Hughes Research Laboratories, USA[21].

A compact lightweight HPM source, the PASOTRON is regarded as the next-generation weapon in Electronic Warfare, used to confuse, upset or destroy an enemy's electronic equipment by causing component burn-outs, logic faults and general disruption of sensitive Command and Control, Communications and Computers, and Intelligence (C^4I) systems.

COMPUTER VIRUS COUNTERMEASURES (CVCM)

Events of the last few years have dramatically demonstrated that computer viruses are not only feasible, but can quickly cause catastrophic disruption of computer systems and networks. Because current trends in the devel-

opment of military electronic systems have increased the vulnerability of the systems to computer virus attack, a new form of electronic warfare has been created - the electronic insertion of computer virus microcode into a victim computer system. This concept could be called Computer Virus Countermeasures (CVCM). Computer viruses once existed only in theory. The concept refers to computer code that can, like biological viruses, both infect software and, acting through infected software and data, reproduce itself and spread within computer systems and connected networks (eg. C^4I and C^3I etc). Unlike existing EW devices, which generally have only a transitory impact, a virus weapon in a tactical warfare setting could have a prolonged and devastating effect on military systems. Current viruses tend to spread rapidly in computer networks, wreck malevolent and pernicious damage and are often difficult to eradicate. In a word, they are persistent.

CHARACTERISTICS OF CVCM

The demonstrated characteristics of computer viruses include[22]:-

(a) **Size.** The amount of program code required for computer viruses has been demonstrated to be surprisingly small. The small size of virus programs has facilitated their ability to attach themselves to software and escape notice.

(b) **Versatility.** Computer viruses have appeared with the ability togenerically attack a wide variety of applications.

(c) **Propagation.** Once a computer virus has infected a particular software, the virus is able to spread to other software accessible to the computer system. The ability to propagate is essential to a computer virus.

(d) **Effectiveness.** Many computer viruses have far-reaching and catastrophic effects on their victims, including total loss of information, data and even software.

(e) **Functionality.** Virus programs demonstrate many functions ranging from damaging software, and deleting information to more subtle malevolent effects against specific victim systems (targets). In some cases, the virus lies dormant until triggered by a specific event, or externally.

(f) **Persistence.** Even after the virus has been detected, recovery of the damaged/compromised software is difficult and, especially in networked operations like C^3I and C^4I, eradication of viruses is complicated by the ability of the viruses to repeatedly and rapidly spread throughout the system. Once electronically inserted into a victim C^3 or weapon system,

via a "soft-spot" (unprotected node or weak-link) or intermodulation, a persistent virus can pay rich dividends in view of the difficulty to contain or eradicate it.

CVCM are uniquely qualified to disrupt, degrade or dilute tactical operations. Because they operate covertly, CVCM may be categorised as a deception technique. CVCM are contagious. They can spread from system to system and from user to user, giving the virus widespread effects. Once implanted into an initial victim, the effects of CVCM will spread to a large group of users. Additionally, this characteristic allows victims to be indirectly targetted through intermediate victims. Through the contagious property, CVCM can initially attack the weakest element in an enemy's defence, and then provide for subsequent transport to the real target. CVCM effects can be precisely tailored and timed for a designated purpose as a part of a specific operation. They can be programmed to seek out specific victim systems, and once there lie dormant until triggered into action, CVCM can be covert. They can propagate and act with the victim unaware of their presence. Denying the victim awareness will prevent him from responding to counter the CVCM, and cause him to accept as fact the false situation that has been created for him. Thus CVCM can achieve the ultimate in deception.

FEASIBILITY FACTORS

Several recent trends in military electronic systems have contributed to the increased viability of CVCM. These include increased use of:-

(a) Multifunction system technology architecture entailing data fusion, integration and sharing of multiple functions

(b) Software intensive systems

(c) Standardisation of computers, software, message formats, data links and associated equipment owing to interoperability and economic considerations.

(d) Distributed and parallel processing

(e) Reprogrammable embedded computers

(f) Networked communications - C^3I, C^4I etc.

COUPLING MECHANISMS

One of the most challenging aspects of developing and employing CVCM is the ability to effectively implant the virus in the target. To be effective, the CVCM must be placed so that it can propagate and infect the system. Most

advanced military C^3I and weapon systems have protective schemes to defeat enemy interference. CVCM possesses unique characteristics that can be exploited to circumvent a majority of these protective schemes. Potentially the most useful characteristic of CVCM for coupling are that the effects of the virus continue after the source has been turned off, and the viruses propagate from system to system. Using these characteristics, four fundamental mechanisms emerge by which computer viruses can be inserted in enemy systems: front- and back-door coupling, and direct and indirect coupling[23]:-

(a) **Front-door Coupling:** Front-door coupling is defined as accessing the target by using media for which the system was designed. In a C^3I system, the virus would be injected directly into the target receiver through data and control links. In weapon control and guidance systems the virus may be inserted via a suitable antenna masked as a credible signal by electromagnetic means.

(b) **Back-door Coupling:** Back-door coupling is defined as any technique used to access the target system by media other than the one for which the system was designed. One approach that has been proposed is to inject viruses via carefully controlled electromagnetic spikes, using an HPM virus gun or similar techniques.

(c) **Direct coupling:** In this technique, the virus is directly injected into the victim computer processor using HPM intermodulation techniques.

(d) **Indirect Coupling:** The philosophy behind indirect coupling is that the initial injection point would be the most unprotected point available and contagious properties of the virus would spread it to the intended target. Highly protected critical C^3I nodes may be vulnerable to contagious propagating CVCM simply because they at some point connect to unprotected nodes. Another technique for indirect coupling of viruses is through maintenance and diagnostic tools by infecting them through covert means.

CVCM Scenarios

CVCM systems may use several operational scenarios to deploy viruses. Some of the available options are:

(a) **Trojan Horse Scenario:** The virus is injected into the target system and lies dormant until a pre-assigned event or time; then, through deception, it causes catastrophic damage to the software, and information. The advantage of this scenario is that the virus has no effect until a desired event occurs so it does not raise suspicions. This scenario can

be used to realise the ECM concepts of dilution, degradation or destruction (of software and information).

(b) **Forced Quarantine Scenario:** The virus would enter a C^3I network or weapon system and announce itself. The C^3I network node would be forced to disconnect itself from the other systems in fear of infecting other nodes of the weapon system would be inhibited in operation. This correlates to the ECM concept of intimidation.

(c) **Overload Scenario:** The overload virus would simply duplicate itself many times to slow down the processing speed of the victim system. This corresponds to the ECM concept of dilution.

(d) **Probe Scenario:** The probe virus would search for a specific piece of data or information and then transmit itself back to a specified location. This would allow deceptive exploitation of critical data or information, thereby achieving the degradation ECM concept.

(e) **Assassin Scenario:** The assassin virus would be injected to destroy critical software or information. The assassin virus would propagate and then erase itself in all locations until it found the target. The virus would then disable the target and erase itself one final time, leaving no trail. This scenario my be used to implement the ECM concept of destruction.

CONCLUSION

The pervasiveness of electronic computer technologies in every facet of military operations has revolutionized warfare. These technologies appear in precision-guided weapons; integrated surveillance systems, including space-based systems; high-speed decision aids, incorporating Artificial Intelligence (AI) and Expert System (ES) software; netted command-and-control systems and, increasingly sophisticated command-and-control, communications and electronic combat systems. C^4I is increasingly becoming the means to the end of command-and-control, information management and intelligence management. As a result, it is imperative to neutralize a relatively few important capital targets - quickly, with profound effect using modern electronic combat techniques (eg. C^4I Countermeasures) rather than the existing platform-oriented EW. This has led to the advent of a new warfare arena - Space and Electronic Warfare (SEW)[24]. Anti-Computer Electronic Warfare techniques constitute a vital component of offensive SEW. Development of anti-computer weapons is likely to have spin-offs in civilian applications, enabling one to paralyse adversary computer systems. The far reaching and catastrophic consequences (including economic) on the adversary can be well imagined. History teaches us that better technology alone does not necessarily lead to vic-

tory. Rather, victory goes to the side which uses technology better or who can deny the enemy the use of his own technology.

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Civil - Military Relations in India and Pakistan : An Analysis

MAJOR MAROOF RAZA

PART II

THE YAHYA KHAN INTERREGNUM (1969-1971)

Pakistan's army, like most other armies, has a 'Hegemonic' organisation, and thus, President Ayub handed over power to the then Commander-in-Chief, Yahya Khan, and not to a protege. However, the military still remained in power.

Summing up the initial few months of Yahya's rule, Javed Burki, states that- "Yahya Khan and his military colleagues dismantled the political system erected by Ayub Khan. Initially, they kept all politicians at bay in the belief that the mission which they set out to accomplish could be performed only if the military worked alone... Even the civil service was assigned a secondary role in the new administration; a number of Ayub Khan's trusted civilians were sent home in keeping with the 'purge' of the civilian bureaucracy... Yahya Khan had thus established a semi-military state, creating a precedent, which was later followed by General Zia-ul-Haq. But there was a contradiction in Yahya Khan's approach. At the same time, that he militarised politics, he also introduced changes which returned the country to parliamentary democracy."[45]

Unlike his predecessors, General Yahya was serious on a return to parliamentary democracy through population based representation in the Pakistan National Assembly. On 30th March 1970, a Legal Framework Order was issued for a fresh democratic Constitutional process.[46]

In the elections held on 7th December 1970, under this legal framework, Mujibur Rahman and his Awami League in East Pakistan swept away 160 out of 162 seats. Bhutto, despite the rhetoric, won with his PPP only 81 out of 138 seats in West Pakistan. Whereas, Mujibur Rahman's mandate was on negotiating a degree of autonomy for the neglected East Pakistan, Bhutto had promised the economic benefits of socialism to the Western Wing. With neither leader interested in drafting a new Constitution, and Bhutto seriously fearing the improbability of himself, and the Western Wing dominating Pakistani politics, boycotted the National Assembly on 3rd March 1971.[47]

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The East Pakistanis, provoked by Bhutto and the apparent biased stand of Yahya Khan, refused to co-operate with the military government, and for a while the Awami League flags even replaced that of Pakistan in Dhaka. Between March and December 1971, under 'Operation Searchlight' the acts of suppression against the Awami League and the Bengali population by a high handed military, led to a Civil-War in East Pakistan.[48]

The Political disorder resulted in a fourteen day war with India, which supported the Bengali struggle for freedom. The 1971 War ended with the liberation of Dhaka by the Indian Army on 17th December, and a massive surrender of over 90,000 Pakistani Soldiers in East Pakistan. Bangladesh was created and Pakistan forever lost its Eastern wing. This was also the end of thirty-three eventful months of General Yahya's military rule, and Bhutto was welcomed to lead, what was left of Pakistan. Ironically, it was Bhutto's earlier refusal to strike a political compromise that had led to the dismemberment of the ideological state of Pakistan.

SIGNIFICANCE OF THE INDO-PAK WAR OF 1971

In this political review of the post 1947 era, the 1971 Indo-Pak War had occurred at about the halfway mark, and its significance is considerable for the purposes of this essay.

Pakistan, had experienced by 1971, both democracy and military rule, and neither had succeeded. It once again returned to a civilian government. Zulfikar Ali Bhutto, who having joined the Yahya Khan Government as a Deputy Prime Minister shortly before Pakistan's military defeat, went to the United Nations in December 1971, to negotiate a peaceful solution to the War. His defiant stand at the UN, with the tearing to shreds a Security Council resolution, followed by a tearful storming out with a vow of 'a thousand years war with India'- was extraordinarily theatrical. To the Pakistani television viewers, a day prior to their large scale military surrender, he emerged as a remarkable patriot, winning for himself the support of even his earlier critics. On his return from the UN to Rawalpindi, with the backing of the majority of the military, he was sworn in as President and Chief Martial Law Administrator.[49]

In India, 1971 was significant domestically for two reasons. Firstly, for the emergence of Indira Gandhi as a viable political force, after her election victory and the start of her second tenure as the Prime Minister.[50] Secondly, she then led India to a resounding military victory over Pakistan in 1971, stunning the world. With the creation of Bangladesh, India emerged as the regional military power, but her powerful military continued to remain strictly sub-ordinate to the legitimate civilian leadership, becoming an example to many developing countries.

DEMOCRACY AND THE INDIAN MILITARY

THE IMPACT OF INDIRA GANDHI (1966-84)

After the death of India's first Prime Minister Nehru in 1964, India witnessed until 1971, prolonged succession crisis and a struggle for power. Nehru's successor Shastri died suddenly in January 1966, and thereafter India witnessed the rise of Nehru's daughter, Indira Gandhi who was to dominate Indian politics between 1966 until her assassination in 1984. It was however in 1971, that Mrs Gandhi finally established her supremacy in domestic politics. Her overwhelming election victory was followed by India's historic military victory in East Pakistan in December 1971. Thereafter, between 1972 and 1975 Mrs Gandhi's distinctive political strategy of centralised domestic rule with authoritative actions, amounted to a rather personalised power projection policy.[51]

India retained an advantage over Pakistan - the absolute non interference of its military in politics, had permitted Indian democracy to mature. The generation of Indian politicians led by Nehru, had spelt out a specific 'military sphere' of activities, and an early alliance had developed between the politicians and the civilian bureaucrats to control the military.[52]

Mrs Gandhi had inherited a deep-seated suspicion of the military from her father, Nehru. She reputedly employed a divide and rule political strategy even against the army higher command, and her efforts were supported by the civil servants.[53] She was also extremely careful, in all her years at the helm of Indian politics, never to involve the military in the domestic environment, beyond a point where its intervention becomes highly likely. Her suspicions of men in uniform were greater specially when in neighbouring Pakistan, two military rulers had left behind a dangerous legacy.

Mrs Gandhi's era can best be related for the purposes of this study, for three aspects. Firstly, it was in her time that India witnessed its only ever break from democracy-between June 1975 and December 1977 - when Mrs Gandhi, aided by a presidential decree, declared a national 'Emergency'. This swift action by her, was to prevent her likely removal from power by her political opponents, with the Allahabad High Court declaring her election as invalid. Interestingly enough, although Mrs Gandhi's 'Emergency' rule did encourage a form of civilian-militarism, she never used the army for her 'Emergency' related political objectives. It was the civil police and the vast para-military forces that implemented her rule.[54] She finally, declared elections, misinformed about her high popularity rating. The election campaign of her opponents centred against the high handedness of her rule, and led to her defeat in the 1977 elections. She was succeeded for the first time by a non Congress government, which lasted for barely

two years. In 1979, Mrs Gandhi returned to power to continue her influence on India's political environment.

This short spell of a change in government had exhibited that Indian democracy, had matured enough to break the continuity of Congress party dominance in domestic politics, and also the ability of the people to choose another legitimate government, without the intervention of its military.

Secondly, it was the Sikh crisis of 1983-84 in Punjab, for which Mrs Gandhi will always be remembered, as it eventually even cost her, her life. The crisis was largely the creation of her earlier political manoeuvres. The Sikhs have served the Indian army for over 130 years, and are till date regarded as extremely effective soldiers, comprising over 20% of the army. The storming of their holiest shrine - the 'Golden Temple', in June 1984 - by the Indian Army, on her orders to eliminate heavily armed Sikh separatist terrorists within the shrine, and the large scale actions of the army in Punjab in 'aid to civil' authorities aroused considerable resentment amongst the Sikhs, a deeply sensitive and religious people. A misinformation campaign conducted by the separatists, on the army actions at the 'Golden Temple' and in Punjab, caused some desertions and a mutiny by Sikh soldiers (though largely recruits at the training centres, who were yet to be 'sworn-in'). This crisis certainly shook the integrity of the Indian armed forces at many levels.[55] It also led to the assassination of Mrs Gandhi, by her bodyguard (a para-military Sikh policeman) in October 1984, and in 1988, the assassination of retired General Vaidya, the army chief in 1983-85 by Sikh terrorists, holding him also responsible for the Punjab crisis.

Thirdly, a little known aspect, but of equal importance to this study is the fact that, it was during her tenure in the 1970's when two outstanding and powerful generals-Lt. Gen Harbaksh Singh and Lt. Gen. Prem Bhagat, VC - were both denied the chance to be the army chief. The promotion of General Raina in 1975 (a month before the declaration of the 'Emergency') and in later years of General Vaidya in 1983, to be the army chief (the latter superseding Lt. Gen Sinha, reputedly one of independent India's most outstanding military minds), created considerable bitterness within the military, and has resulted somewhat in the politicisation of the military higher command.[56]

The impact of Mrs Gandhi's political region thus, created a long-term danger to the Indian political system, of both, a militarization of politics and a politicisation of the army. However, there has never been an attempted coup in India, and the obstacles to military intervention are formidable. This has essentially been possible by the existence of India's unique present day defence structure which has in comparison to Pakistan, helped Indian politicians to retain power, despite the numerous turning points in the years since 1947.

THE STRUCTURE OF INDIA'S DEFENCE HIGH COMMAND

During the British 'Raj', there was a considerable overlap in the 'civil' and 'military' spheres, in India, resulting from the British failure to set a firm guideline, for separate spheres of influence. The 'democratisation' of India's military was done initially by reducing the overbearing and sometime autonomous influence it had in the policy process. The politicians did this without disturbing the inherited ideological and recruitment patterns. Besides, this was aided, both, by India's inherited advantage in the competence of its politicians and civil-servants (even on military matters), and the fact that, most serving Indian officers were young (with only a few having reached even the Brigadier rank at independence).[57]

The Congress Party leadership decided that defence matters were to be relegated from the mainstream of Indian politics, and from the earliest days, an information policy was formulated making any intelligent criticism of defence matters, rather restricted.[58] A defence structure was created wherein, at its apex was the Indian President, a 'de jure', Supreme Commander. The 'de facto' Command emanated through the Prime Minister and the Political Affairs Committee - it includes the Defence Minister and some other Cabinet Ministers, which controlled broad matters of defence policy. The actual control is exercised by a civilian Defence Minister and his staff of secretarial officers, all bureaucrats. The three service Chiefs are restricted to the Defence Ministers Committee and have their own Chiefs of Staff committee (the highest professional defence advisory body for the government). It is thus, the Defence Secretary, a bureaucrat, who is the pivot of all defence matters, and the Service Chiefs are in fact excluded from India's final decision making body - the Cabinet Committee on Political Affairs.[59]

The ever lessening influence of the Indian Military, and its absence from the highest levels of the defence policy process, has been accepted by them, without serious opposition. They have however, considerable operational freedom and authority during War.[60] In peace, the three Service Chiefs are treated a formal equals (despite the distinctly larger size and role of the army), and their advisory powers are limited to that of their Defence Minister.

Commenting upon the immense amount of civilian control on India's military, Lt. Gen S K Sinha (now retired) once wrote that - "it is axiomatic that in a democracy the civil government must be supreme, and the Indian military does accept this view. What has begun to cause resentment is that India's defence high command also caters for the supremacy of the civil servant, making India's defence services ham-string by three tiers of control - ministerial, secretarial and financial."[61]

Finally, there remains a long standing debate over the role of the three Chiefs,

and that of the appointment of an overall Joint Chief of the defence staff (CDS). This goes back to 1949, and was raised in the 1960's and more recently in 1982. This system, essentially advocated by the army, proposes its head to be from either of the three services. The army's view, that this system would provide greater operational co-ordination and efficiency, (the lack of such co-ordination being obvious in retrospect, in the 1965 and 1971 Wars, and even thereafter) has been challenged by both the politicians and the other two services, i.e., the navy and the airforce. The political argument supported by the civilian bureaucracy, is based on the possibility of enhanced political power of the military. The other services (navy and airforce) fear that such a system would reduce their status to less than equal - an equality enjoyed by them since 1947. Hence, the prevalent Indian system of a Chief of Staff Committee, wherein, its Chairman is a rotatory appointment, given to one with the longest tenure 'on the Committee' itself.[62]

Thus, "in India", says Stephen Cohen, "strategic decisions are essentially made by civilian, politicians and bureaucrats, the military is under tight fiscal control, and it certainly has no broader sense of mission or purpose." Pakistan's army in contrast "has always regarded itself as a special expression of the idea of Pakistan."[63]

Jinnah had emphasised on the need, to keep Pakistan's military outside its national-policies, and lessons are still imparted in political neutrality to potential officers at Pakistan's Military Academy. However, a civilian government with deteriorating political legitimacy appears no longer an arbiter to the military - which often functions on the margin of moral behaviour-and herein emerges the embedded moral dimension to their political interventions.[64]

POLITICS IN PAKISTAN - (1971-88)

THE RISE AND FALL OF BHUTTO

While India experienced, a distinctly different form of democratic growth under Mrs Gandhi, wherein its neutral military regularly faced the threat of politicization - the post 1971 period was equally significant in the case of Pakistan. For the first time in twenty five years, Pakistan's army was removed as a political force after its defeat in the 1971 Indo-Pak War, and its generals were willing to become subordinate to the political authority of civilians.

Zulfikar Ali Bhutto emerged as the leader of the now one consolidated Pakistan, and having been offered the chance by history, to shape its destiny, his era can best be remembered for both its dynamism and lost opportunities. He obtained a political consensus for Pakistan's third constitution, and this came into force on 14 August 1973. Bhutto did achieve economic restructurisation and some

growth. It was his intention to unsurp political power and ignore the political consensus to share power between the government and the federal provinces, which was his undoing. His dismissal of the Baluch government, and the resignation of the Frontier government in frustration, in 1974, confirmed the worst fears of the opposition - Bhutto was leading Pakistan into a one party state.[65]

Bhutto's familiarisation with the army was essentially with that of the social upper class officers of Ayub's period. In the ensuing decade, the middle class was strongly represented amongst the officers. Bhutto's economic reforms were considerably disappointing to the Pakistan's middle class, earlier his strongest support, and this in turn, influenced the growing unhappiness with Bhutto within the armed forces.

Besides, Bhutto's rather confrontational foreign policy approach to the West, for long a supporter of Pakistan, and his espousal of Third World causes, made Pakistan's Western oriented elite positively unhappy. Bhutto had however, managed to keep the religious fundamentalists happy with a formula of Islamic Socialism. It was the regular political interference at all levels by his party members that undermined the authority of the Civil Servants and caused the law and order situation to deteriorate.

With the extensive use of the army to supplement the local police, as in Baluchistan, and ignoring the warnings of politicians and civil servants that things were moving on a familiar course - mounting agitations, political disorder and domestic 'martial law' - Bhutto had asked for the inevitable. On 5th July 1977, General Zia-Ul-Haq, promoted by Bhutto over more senior generals as the army chief, removed Bhutto, and became the Chief Martial Law Administrator. History had repeated itself in Pakistan.[66]

THE MILITARY RETURNS TO PAKISTAN'S POLITICS-UNDER GENERAL ZIA

On assuming power, General Zia had announced his intentions to organise free and fair elections, to keep the army professional and outside politics. Bhutto was soon freed and with other politicians, permitted again, to campaign for elections. Bhutto drew large crowds, and made the mistake of suggesting that General Zia and his colleagues, be tried for treason under the 1973 Constitution for their role in the military takeover. The elections were postponed, Bhutto was arrested with his associates, and asked by the military to justify their mismanagement of Pakistan's politics and its economy. Soon thereafter, Bhutto was convicted by the Lahore High Court, as an 'arch culprit' in the murder of a political opponent, and on 4th April 1979, he was hanged in Rawalpindi.[67]

General Zia assumed the Presidency in 1979 and his political experiment

was strongly based on the Islamization of Pakistan. A devout Muslim himself, Zia had an obvious nose also for politics, and remembered only two well the negative reaction that both Ayub and Bhutto had created, by ignoring the powerful lobby of religious fundamentalists. In an attempt to revive Islam, he implemented the harsh Islamic 'Sharia' laws of punishment - flogging, amputation and stoning to death. This combined with the execution of Bhutto, made him in the eyes of the international community, a modern day tyrant. However, with the Soviet invasion of Afghanistan in 1979, Zia suddenly became the bulwark of the free world to hold back the flood-time of Communism. The flow of US military aid and foreign money soon started, providing Pakistan's military with sufficient incentive to dominate even its foreign policy.[68] Pakistan's threat perception was now not simply strategic, but was layered with an 'Islamic' flavour as well - from 'Hindu' India on one side, and the Communists on the other.

General Zia also influenced a new pattern of Civil military relations. Zia's major impact on Pakistan's politics was with the creation of a new pattern of civil-military relations. On 2nd March 1985, he promulgated an order, introducing 'sweeping changes to the 1973 Constitution and extraordinary powers were given to the President, whose discretion was to be final' - says Javed Burki.[69]

Zia retained his uniform and his appointment as the army chief. He however, appeared to have solved one of Pakistan's major political problems - the domestic role of its armed forces. On 23rd March 1985, he picked Mohammed Khan Junejo, a veteran politician from Sind as his Prime Minister. A system of 'diarchy' was created with a military President and a civilian Prime Minister. A Cabinet, National Assembly and four provincial assemblies were soon functional.[70] However, in Emma Duncan's view - 'The Civilians were there as administrators, however, not policy-makers. The real stuff of government was done by Zia and the Generals who he had appointed as governors of the four provinces... they were the country's most powerful men.[71]

The experience of Ayub, Yahya and even Bhutto to reform Pakistani politics and to create a stable balance between the 'political' and 'military' sphere of activities, possibly haunted Zia and his colleagues, when in May 1988, he sacked Prime Minister Junejo, and dissolved the Cabinet, National Assembly and also the four provincial assemblies. Elections were announced to be held within 90 days, but later put off until 16th November.[72] On 17th August 1988 President Zia died in a mysterious aircraft explosion and an eye witness account of his funeral by Emma Duncan, sums up effectively, the power wielded by Pakistan's army - "Above the public political intrigue, at the back of the stands were the people who really mattered. Against the loose comfort of the 'Shalwar-Kameez', their Khaki uniforms looked stiff and smart. Their chest flowered with medals, their backs were straight and their eyes watched the politicians like adults checking the antics of a school playground."[73]

CONCLUSION

The two decades following the 1971 Indo-Pak War saw the continued influence of the Congress Party, and more specifically, the Nehru dynasty members - Indira and her son Rajiv - on Indian democracy. Pakistan, witnessed once again the failure of its democratic experiment with Bhutto, and the re-emergence of the military under Zia, as its most powerful political force. Both India and Pakistan also witnessed, in varying degrees, a different dimension of military involvement in politics - in the former, the politicization of the military was visible, and in the latter, a 'diarchy' of military-cum-civilian control was for sometime adopted.

Rajiv Gandhi, who was elected as India's Prime Minister, after his mother's assassination, in 1984, encouraged economic modernisation. Also, during his tenure, India's defence expenditure was placed at 16.6% of the overall government expenditure, giving her a rather aggressive image. This was substantiated by a TIME Magazine cover story titled 'Super India' (3rd April 1989).[74] The increased influence of the military in India's dominating regional security posture was becoming apparent, and General Sundarji, its brilliant army chief (now retired) was responsible not only for encouraging the theory of 'coercive diplomacy', but also reported - "to influence so markedly, by the sheer force of his personality, the political leadership of the Country."[75] However, the structure of India's civil-military relations remains sound, and political legitimacy remains high. India has since 1989 seen two opposition coalition government, in 1991 the assassination of Rajiv Gandhi by a terrorist, and a return to the rule of the Congress Party after the elections in June 1991.

In Pakistan, after General Zia's sudden death in August 1988, the Senate Chairman Ghulam Ishaq Khan, assumed its Presidency and Benazir Bhutto became its first woman prime minister. However, President Ishaq Khan sacked both Ms. Bhutto (in 1990) and her conservative rival Nawaz Sharif (in April 1993), on unsubstantiated charges of incompetence of corruption. Ishaq Khan's free interpretation of his Presidential power (a legacy of the constitutional amendments tailor made for General Zia), plunged Pakistan into its habitual political chaos and domestic disorder. A historic Pakistan Supreme Court Judgement re-instated Nawaz Sharif, only temporarily though, as a political duel between Mr. Sharif and an embarassed Ishaq Khan led to an incapaciated government.[76] Their power struggle continued until the Army Chief General Kakar and his men in Khaki (to some observers the archspoilsports of Pakistan's democracy) mediated a compromise, with the Army showing their iron fists though covered with valvet gloves. For a change, 'Pakistan's army has played impeccably down the middle', possibly because of US and European threats to cut off aid to Islamabad, in case of a military takeover. In the 1993 elections Benazir Bhutto triumphed. However, the answers

to questions as to whether the idea of martial law in Pakistan is likely to pass into history and whether its military has finally converted to accept democratic principles, will depend solely on the ability of Pakistan's blundering politicians to save its democracy.[77]

Thus, the hypothesis of Huntington (as given in the introduction) is distinctly applicable to both present day India and Pakistan. Its military institutions have (as we have seen) been shaped by the over-riding influence of both the 'functional' and 'societal' imperatives and the reaction between these two forces.

Huntington had further defined the principal focus of Civil-military relations as - "the relation of the Officer Corps to the State". Here, he maintained, "the conflict between functional and societal pressures comes to a head. The Officer Corps is the active directing element of the military structure and is responsible for the military security of society. The State is the active directing element of society and is responsible for the allocation of resources among important values including military security. The social and economic relations between the military and the rest of society normally reflect the political relations between the officer corps and the State."[78]

In Pakistan, the intervention of the military on both occasions, under General(s) Ayub and Zia, took place when the conflict between the functional and the societal pressures, threatened the security of its society. India, on the other hand has exhibited that its 'State' (represented by the civilian politicians and bureaucrats) has remained the active directing element of its society.

A final statistic conveys a strong message. The steady decline in the turnout of Pakistan's voting electorate from 64% in 1970; to 52% in 1985 and 42% in 1988 - does suggest a public disillusionment with politics. Many apparently see no point in voting, as they feel that anyway it is the generals and not the politicians, who will make all the major decisions.[79] In contrast, India's turnout of voters has increased over the years - from 45.7% in 1952, to 61.3% in 1967; and 75% in the 1980 elections. Regular elections in India have achieved the politicisation of an indifferent and apathetic Community.[80]

To sum up, Pakistan has shown that under certain circumstances even a professional army, although committed to democracy 'can' intervene, to provide political stability and reform. Its military however has retained and ethnic dominance of Punjabi's and Pathans, which has assisted a better understanding of a common goal, and in turn, their intervention in politics. Further being in a strategic disadvantage at partition, its generals developed direct foreign ties for military aid, enhancing their influence. Above all else, Pakistan's political system had never settled as deep and effectively as India's, and the army often proved its ability to govern more effectively than its civilians.

In India, despite the absence of such factors, many Indian observers feel that the absence of political control in a society tending towards anomie, may place India where Pakistan was in the mid-1950's, although, the large and diverse Indian military has openly dismissed the idea of intervention to seize power and attempt to govern its large and complex political system.[81]

Their subordination to political leadership remains firm, and India's government continues to be led legitimately. The 'positive' contribution of the Indian military is the constant support they have extended with competent professionalism towards Indian democracy. Their 'negative' contribution, as some observers feel, is that they have refrained from increasing their influence, within the post independence policy process.[82]

One final factor that is confirmed by our study in this essay, is that the armed forces operate at the margin of moral behaviour, and they shall obey civilian authority as long as it appears legitimate. The military derives its legitimacy from both, its constitutional position and the public acceptance of its role, and thus, its involvement in the affairs of the 'State' has to be properly so within the accepted principles of democracy.[83] The present day civilian leadership of both India and Pakistan would de well to remember that a loss of legitimacy and political incompetence, provides the strongest encouragement for military intervention in politics.

(Concluded)

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45. Ibid - pp. 209-210.
46. Ibid - pp. 210-211.
47. Ibid - p. 211.
48. Ibid.
49. Ibid.
50. Ibid - p. 174.
51. Ibid - pp. 174-175.
52. Cohen - op. cit - *'The Indian Army'* pp. 29-30 and 175.
53. Cohen - op. cit - *'India's Democracy'* - pp. 119-120.
54. There remains in retrospect, a general public aproval for the nationwide military - like efficiency Mrs Gandhi encouraged in India, between 1975-1977. The military also seemed happy to witness a serious, obedient and disciplined society. See Cohen - op. cit - *'India's Democracy'* - p. 129.
55. Cohen - op. cit - *'India's Democracy'* - pp. 132-137.
56. Ibid - p. 120.
57. Cohen - op. cit - *'India's Democracy'* - p. 105.
58. Cohen - op. cit *'Indian Army'* - p. 174.
59. Cohen - op. cit - *'India's Democracy'* - pp. 115-116.
60. After the experience of the disastrous Chinese aggression of 1962, when India's military felt seriously betrayed by its civilian leadership - specially Nehru and his highly influential Defence Minister, Krishna Menon - the military has thereafter insisted upon and received total operational freedom, in War. There was absolutely no political interference in the 1971 War, from its commencement until the total East Pakistani surrender - and this seems to now have become the

accepted norm in India. See Stephen Cohen - op. cit - *'Indian Army'* p. 176 and *'India's Democracy* - p. 113.

61. For a pragmatic view of India's post independence defence command structure, and its drawbacks, see S K Sinha's - *'Our Defence High Command'* - in USI Journal (India) July-September 1964.
62. Ibid and Cohen - op. cit - *'India's Democracy'* - pp. 118-119.
63. Cohen - op. cit - *'Pakistan Army'* - pp. 105-106.
64. Ibid - pp. 118-120.
65. Robinson (ed) - op. cit - p. 213.
66. Ibid - p. 214.
67. Ibid - p. 214, and Emma Duncan - *'Breaking the Curfew'* (Penguin - London, 1989) p. 68.
68. Duncan - op. cit - pp. 69-70.
69. Robinson, ed - op. cit - p. 214 - This came to be now known as *'Zia's Eight Amendment'*.
70. Ibid.
71. Duncan - op. cit - p. 69.
72. Robinson, ed - op. cit - p. 215.
73. Duncan - op. cit - p. 2.
74. Nicholas Nugent - *'The Defence Preparedness of India: Arming for Tomorrow* - Miltech 3/91- pp. 27-36.
75. Ibid - pp. 32-33.
76. Lawrence Ziring - *'Pakistan in 1990'* - Asian Survey February 1991, and Time, June 7, 1993 p-27.
77. See Time International - August 2, 1993, Apr 19-19.
78. Huntington - op. cit - p. 3.
79. John Bray - *'Nawaz Shjarif's New Order in Pakistan'* - Round Table 1991, 318 (179-190) p. 190.
80. Urmilla Phadnis, ed - *'Domestic Conflicts in South Asia'* (South Asia Publishers, New Delhi - 1986) p. 89.
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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

Sir,

HONOUR THE VETERANS

I happened to be in the States recently, when the golden jubilee of the Normandy landing in World War II, was being celebrated with great gusto all over America. Military parades were held throughout the country with various functions organised to honour the still living veterans and remember the dead. The purpose behind the whole exercise was to enlighten the younger generation, born after World War II, about the historical and heroic role played by the American soldier in that War, and to instil a sense of pride in them about their past glory. That is what all self respecting nations do, to arouse nationalistic fervour and inspire their fellow beings to prepare them for future eventualities.

In our country, even after Independence, we have done nothing so far to honour the soldier who has fought for that very independence in the two wars in Kashmir, or who sacrificed himself for a political gain in Sri Lanka, or who brought military glory and honour to the entire nation in the Bangladesh War. Little is it realised that, in contemporary history ranging over 2000 years, there have been only 14 decisive battles in the world, and the battle of Bangladesh, which brought about its independence, was the fourteenth, a feat which will go down as unparalleled in the annals of world military history. In 1996 Bangladesh will be completing 25 years of her independence. The Government of India should take a cue from USA and other such countries, and go all out to make a big splash, to honour our Bangladesh and other war veterans, and remember the sacrifice made by them, which has kept this Country united and strong. Planning for this however must start now.

Yours faithfully

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Brig N B Grant

II

Sir,

This refers to the lead article by Lt Gen AM Vohra in the January-March 1994 issue of the Journal.

Under 'Higher Control of Defence' (page 14) it is stated that the Financial

Adviser to the MOD "is an official of the Ministry of Finance.....Financial advice should be available to various ministries from FAs integral to these. In this case the FA should function as an officer of the MOD so as to terminate the control by the Finance Ministry after funds have been allotted."

The above observations are glaringly outdated. The scheme of Integrated Financial Advisers has been in existence in various civil ministries for a long time. It was extended to MOD from as far back as 1-8-1983. From that date the FA(DS) and his staff are no longer officials of the Ministry of Finance but function as the fully integrated Finance Division of the MOD.

Whether this arrangement has in practice resulted in more effective and timely decision making is, of course, quite another matter.

Yours faithfully

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New Delhi - 110 057

G C Katoch

III

Sir,

BRIGADIER PRITAM SINGH

This refers to the article Brigadier Pritam Singh: the Saviour of Punch by late Brigadier RC Butalia (Apr-Jun 1994).

I served in the area in 59; Brig Pritam Singh was still revered by some of the inhabitants who had been through the 'seige' with him. To have carried the garrison and its population through that period called upon qualities of generalship, and administrator that the capable Brigadier did not lack: what then is the 'cloud' alluded to in the concluding paras of the article (page 226: a soldier's vindication can never be too late).

Would some of the Brigadier's comrades in arms/archives fill some gaps : details of numbers of Hindu, Sikh, Muslim, Christians etc who sheltered in Punch; now many able-bodied, children, women; how many sick/wounded were treated/ evacuated. Who for instance were the gunners who handled first the mountain guns and then 25 pdrs; who were the 'Blue boys' who operated to and fro from Punch? Any earlier reference to accounts published in the USI or books in the library and sketches showing location/disposition of opposing contenders would have made assimilation of a fine account of one of our great field commanders of that era easier, Perhaps suitable editing could fill one on some of the above?

Yours sincerely

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Colonel Balwant S Sandhu

IV

Sir,

CREDIBLE DEFENCE WITH REDUCED EXPENDITURE

I have read with interest the essay titled 'Credible Defence with reduced expenditure' written by Maj. B.A. Prasad. While there is no doubt that the author has made some commendable efforts to analyse our defence organisation and its expenditure pattern with a view to enhance our security, it is regrettable that he has posed many issues which are derogatory and irrelevant. For example, his observation that the teeth to tail region has been contributed by degenerate competition and practice is most objectionable. Every professional soldier who is dispassionate and objective would know that during the last 40 years there has been a tremendous pruning of the strength of the services by various government orders and instructions. In fact, today many of the services such as Army Service Corps, the Medical Corps and the Electrical & Mechanical Engineers would be hard put to sustain fighting arms in case we get involved into a full fledged war. The rationale for the various defence logistic establishments has been well examined by various committees who have been headed by senior officers with no links to any logistic department.

The author's comment that the AMC to be cut to 1/10 of their size or EME to be reduced to 1/3rd is mere verbal arrows thrown to confuse readers. Those who have experienced the industrial unrest prevailing in our country would know that our dependancy in critical functions cannot be totally linked to public sector or even State Government Undertakings which boast of various facilities. I do not understand how the author of this article has propounded the theory that RTC, FCI and perhaps the oil corporations can directly maintain units in different field locations.

The statement that permanent staff of 7,000 to train 1,000 cadets in IMA, makes one wonder whether the author has deluded himself from figures borrowed from imagination.

Finally, he has made some derogatory comments that the army is thriving on a five star culture detrimental to the society and the establishment. Obviously, Major Prasad wants to corner some limelight by writing some sensational falacies and myths on the strengths of combatants employed as Sahayaks or other supernumeries. Perhaps the author's penchant for writing in style to make a readable copy has overtaken the need for rational thinking based on the realities on the ground. It is high time such professional officers show prudence, caution and maturity and avoid tendency to throw mud for the sake of some fine copy print.

Yours sincerely

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Brig A. Thyagarajan (Retd.)

V

Sir,

DEFENCE R & D

Whilst congratulating AVM Samir K Sen, on his excellent article on India's Defence Industrialisation, and his plea for setting up a centrallised authority for management of our defence technology & industrial base, I request permission to comment on three statements, which need to be corrected.

Firstly on p. 156 he talks of entire set up of the TDEs being manned by civilian engineers. All TDE's except Metallurgy at Ishapore at the final disbandment were run entirely by the military officers, scientists recruited were also in uniform. There were of course lascars.

Secondly--talking of DRDO's isolation from the main stream of production, due to unwillingness of bureaucrats and services to integrate development and production. I quote Maj Gen B.D. Kapur our first CORD, in his book *Defence Technology Base* stated "The CCRD decided to subordinate his status to that of the CGDP--approval of the Govt was obtained, but Dr Bhagvantam--recently appointed S.A opposed the breaking up of his Empire!"

Thirdly on the British organisation. p 161. The Scientific Adviser, is chairman of the Equipment Policy Committee, but does not head the DRA (Defence Research Agency)--which has to compete against private sector agencies to obtain development contracts. The P.E (procurement Executive) does not have under him the Controller of Navy, M.G.O or the Controller of Aircraft-they are responsible to their service chiefs.

Alienation both with services & industry was at it's nadir when we opted for liquid fueled missile programme. The advantages of solid propulsion used by the developed world, as enumerated below, were discarded.

Motors for liquid propelled missiles are very complex, and difficult to produce. The fuel and the oxident are separately tanked, the manufacture of injector nozzles, valves and pumps is a costly precision engineering job, making them more expensive.

Liquid propelled systems require loading, and topping up before firing. A daunting task when the enemy is actively searching for missile launchers. Due to the need to shoot and scoot at speed in the heat of the battle, liquid fuelled systems are extremely difficult and dangerous to operate.

To compensate for our past errors, it is hoped that our scientists have learnt the Israeli "Lance" system using packaged liquid propellent, which is comparable to the preferred solid propulsion system.

Yours sincerely

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Maj Gen Partap Narain (Retd)

Review Article 1

New Strategies for Nuclear Weapons

BRIG VIJAI K NAIR VSM (RETD) PH.D.

The primary objective of the book is to explore the effects of the Arms Control Rules of the game, after INF and START, on the evolution of nuclear strategy. It challenges the logic of weapons development programmes in the light of arms limitation negotiations and concludes that American nuclear strategies need to be reconsidered.

Having been on the staff of the Congress for National Security Affairs, specially during the intricate negotiations of SALT I and SALT II, the author has the benefit of first hand knowledge of the evolution of American security strategies during a crucial stage of the nuclear era and is, therefore, eminently competent for such an undertaking.

Before delving on the development of nuclear strategies, he makes two very pertinent observations which need to be taken note of seriously by the strategic community that indulges itself in policy analysis and option formulation. First - " ... no matter what the outcome of any arms control scheme now being proposed, nuclear weapons are here to stay. *That Pandora's box has been irrevocably opened.*" Second, he observes that, - " ... it was also a little frightening watching how decisions are really made, most unfortunately, *with little thought to long term consequences.*"

The author carries out a review of the development of nuclear strategies in the United States over the past four decades with special attention to the factors that provided the impetus to this evolution. He examines: the strategy of *implicit massive retaliation followed by that of massive retaliation* of the 1950s; the subsequent rationalisation of a *flexible response to MAD* of the 1960s; and rounds it off by discussing the atmospherics that surrounded a wide set of strategies that marked the last two decades, aimed at creating options that would provide scope to prosecute *limited nuclear war* under the guise of doctrines of *sufficiency, countervailing, counter force targeting, essential equivalence* and so on.

All these doctrines hinge around common factors viewed through lenses whose focal length is continually varying based on the targeting options, perceived degrees of vulnerability, perceptions of hostile capabilities, techno-

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The New Nuclear Rules : Strategy and Arms Control after INF and Start, By James L. George, New York, Martin, 1990, p. 197, $ 45.00, ISBN 0-312-02830-X.

logical stretch potential, and the differing nuances of deterrence. However, the author concludes that the touch stone of nuclear philosophy remains, in the words of General Arnold, "Our first line of defence is the ability to retaliate even after receiving the hardest blow the enemy can deliver."

The reader would be advised to contest the logic employed to paint a grim picture for the United States and a reasonably rosy one for their arch rivals, the USSR. The bottom line advocated is that major cuts being propagated by START would generate unacceptable aberrations in the United States security philosophy. While reductions and technological restrictions may be accepted after study and negotiation, the nuclear capability with the United States must be maintained. In other words, a nuclear weapons capability for the United States is a must.

Finally, the author examines the on-ground realities of the growth of strategic concepts in the United States. He argues that there are no really good institutional arrangements for the formulation of strategies to meet overall national security imperatives. The lament is that budgeters, targeteers and ideologues have usurped the billet of the strategist. A universally relevant question posed is, "where are the strategists? Where are those who can rise above the fray to take an objective look at the future?"

This book makes good reading and provides a good insight into the American view of strategic developments in the nuclear era. It has contemporary relevance for the decision makers, policy makers, strategists, budgeters, ideologues and service bureaucracies that are charged with handling national security.

Review Article 2

The New American Vision

LT GENERAL M L CHIBBER PVSM PH.D. (RETD)

History has burdened America with the role of world leadership. Can the Americans rise to this challenge? They can if they understand that leadership which does any lasting good 'is idealism in action' and the most powerful instrument of leadership is love. These are the eternal truths about leadership at all levels - family, institutions, enterprises, communities, nations, and mankind.

The great hope lies in the composition of the American people. They are the most vibrant and enterprising immigrants or their scions from all parts of the world. They also have the history of rising to great heights when fired by idealism - cold war for instance.

'American Purpose' is a very interesting, even though a bit dated, collection of essays. These were written during 1990 by sixteen eminent thinkers of America on the country's foreign policy after winning the cold war. They have expressed their views about the future role of the USA in the world with condidness which is the hall-mark of the American character - a great strength.

At one extreme, Patric Buchanan argues that the American purpose should be "America first - and second - and third"; avoid all foreign entanglements. On the other extreme is Josef Joffe's exhortation that "there is pleasure in being number One. To exert power is better than suffering it; to be at the helm is better than hunkering down in the hold".

In between the two extremes lie a whole range of options that have been discussed. In almost all the essays the focus is on what each author perceives is the National Interest of the USA. And each one perceives it differently. Hence the vast diversity of views that are put forward.

For more than two centuries the world has been dominated by the emergence of nation states and it's corollary, 'national interest'. In the highly competitive life in the industrial societies, the 'me-first' syndrome of self-centred -individualism and 'my-national - interest-first' concern of the foreign policy exponents seem to be in perfect harmony. But the eternal truth about leadership that does any enduring good is different. No individual can lead effectively unless he can rise above mere self-interest. Similarly, no nation can lead effectively unless it can rise above mere

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America's Purpose : New Visions of U.S. Foreign Policy, By Owen Harries, New Delhi, Macmillan, 1991, p. 175, ISBN 0333 92594 7.

'national interest'. Teachers of international relations have given such halo to the concept 'national - interest' that it is placing a ceiling on the evolution of man. Unfortunately, idealism is dismissed as an empty rhetoric by many who are wedded to "pragmatism" or "being realistic". Their approach to what should be America's purpose is lucidly expressed by Irving Kristal. "It is one's enemy that helps to define one's national interests". Since the USA has no matching enemy the awareness about America's interests appears to him to be floundering " amidst a plentitude of rather trivial or at least marginal options". He then goes on to suggest a three point programme to invent an enemy for America's foreign policy:

* Let no other super power emerge whose political and social values are profoundy hostile; consequently,
* those nations which largely share our political principles and social values should be protected from those who do not ; and
* our relations with other nations of the world will be decided on case - by case basis. There is absolutely no harm in having double, triple or numerous standards.

When one reads the essays a second time one finds that there are a few issues on which there appears to be a general consensus. And these points suggest a sound approach to equip America for its leadership role:

* 'America must urgently attend to her domestic problems; fully integrate multi racial, multi cultural and multi religious groups of immigrants into a fully integrated society; restore values and virtues which built America; revive her economy; and revitalise her educational system'. A pure and healthy body and mind are essential for an individual or a nation to be a leader and a role model.
* 'Lead the world by persuation and not by power".
* 'Support freedom and democracy through international institutions'.

Robert Bartley in his essay titled 'A Win-Win Game' perceives the mega trend in the evolution of man dead right when he talks of the "emergence of an interconnected, integrated, interdependent world order". He, infact, is supporting the well known articulation that man's destiny in the 21st century is 'unity of man, global economy and earth citizenship'. He is also right in his prescription for America's national purpose in the world. Namely:

> "to build international institutions appropriate to the world order waiting to be born and to manage the friction it will create. It surely does not mean creating a new United Nations or other world-government-at - a - stroke. But

it may well mean a broader application of the slow, step - by - step, economic - first evolution towards unity we are already witnessing in the European Community".

If Americans chose Robert Bartley's recipe, they will have enough time and resources to integrate and revitalise their society to lead the world. To consolidate and perpetuate their world leadership role they will do well to remember General Mathew B Ridgway's famous explanation of character which is the foundation of leadership by an individual or a nation:

> "Character stands for self discipline, loyalty, readiness to accept responsibility, and a willingness to accept mistakes. It stands for selflessness, modesty, humility, willingness to sacrifice when necessary and, in my opinon, faith in God. Let me illustrate.
>
> "During a critical phase of the Battle of the Bulge, when I commanded the 18th Airborne Corps, another Corps Commander just entering the flight next to me remarked - 'I am glad to have you on my flank. It's character that counts'. I had long known him and knew what he meant. I replied, 'That goes for me too'. There was no amplification. None was necessary. Each knew that the other would stick however great the pressure, would extend help before it was asked, if he could; and would tell the truth; seek no self glory, and everlastingly keep his word. Such men breed confidence and success".

Anyone interested in the shape of the world in which our children and grandchildren will live should read and re-read this book. And not begrudge the Americans their leadership role because the Americans are as it were, a world community.

Review Article 3

China and the Bomb - A Korean War View

MAJ GEN D. BANERJEE AVSM

Many years of analysis and deliberation by the superpowers finally led President Reagan and general secretary Gorbachev to declare in 1985 at Geneva, that a "Nuclear War cannot be won and must never be fought". A year earlier Robert Mc Namara, erstwhile US Secretary of State for Defence had stated that a "Nuclear Weapon serves no useful purpose, nothing at all, except to deter another nation from using it". But this has not always been the case. Two nuclear bombs were dropped on Japan, when the nation was near defeat, merely to hasten the process of surrender. Its use was in a state of assymetry when it was the only country that had the Bomb. What was the actual situation in the Korean War? Mark A Ryan has carried out a detailed study of "Chinese Attitudes towards Nuclear Weapons" during the Korean War, using hitherto classified US sources, as well as open Chinese documentation. It makes a fascinating study and in some ways may explain why in May 1992 China carried out a massive underground nuclear weapons test of a gigantic one mega tonne (MT) yield, when the other nuclear weapon powers were considering a test ban.

The nuclear explosions over Nagasaki and Hiroshima came as a shock to the Chinese Communist hierarchy even if they were not a complete surprise. Mao Zedong and the senior leaders discussed its implications at length. After all, their Revolution was yet to be completed. What opposition might they face? Mao's immediate reaction was that weapons alone have never decided wars and the atom bomb would be no exception. It was the people who decided the outcome of a war and they can stand up to the Bomb.

Nuclear weapons use was a serious option considered by the USA throughout the Korean War, but for the purpose of simplicity it can be divided into four broad contexts. First,was to stop the Chinese People's Volunteers (CPV) in their initial headlong rush into Korea in Nov-Dec 1950. It was then to be used primarily against tactical targets. On Nov 30, President Turman openly acknowledged it in a press conference. Acknowledging that use of nuclear weapons have been considered, he even stated that it was for the military to decide its actual use in the battlefield. It was an obvious mis-statement of policy by the President and was soon corrected, but it reflected the mind set of the top decision makers. The next context was in the broad strategic sense that General MacArthur recommended and the targets for this varied from Manchuria and industrial centres in China

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Chinese Attitudes Toward Nuclear Weapons - China and the United States during the Korean War. By Mark A. Ryan, New York, Sharpe, 1989, p 327, $ 37.50 (HC) ISBN 0-87332-530-3.

to all the cities of North Korea. The objective was punitive and was to compel CPV withdrawal from Korea. MacArthur's insistence was to cost him his job.

The third time was during the military stalemate that lasted for most of the Korean War. Its use planned against the CPV forces defences, concentration areas and artillery positions. But by then the CPV had prepared such extensive dug-in defensive complexes that it was accepted that nuclear weapons would do little damage to them. Finally, John Foster Dulles claimed in 1953 that his implied threat of nuclear weapon use against China, conveyed through various means, was instrumental in speeding up the armistice signature.

Chinese attitude towards nuclear weapons has gone through many phases. It always took the weapon seriously. Not only did its armies resort to elaborate defensive measures, civil population in its cities were to be sheltered in extensive underground complexes. Extensive studies were carried out, numerous booklets and pamphlets propagated counter-measures, and plans for new cities were evolved with this as the foremost consideration. There was much reliance on the growing Soviet nuclear capability as a possible deterrent to US weapons. However, the Chinese were never confident of it and asked Moscow for help in developing its own weapons. Soon, however, Mao realised that no reliance could be placed on such assistance. In mid January 1955 China decided to build the Bomb. Mao stated that, "If we are not to be bullied in the present day world, we cannot do without the Bomb".

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Review Article 4

Japan's Foreign Policies: The Dichotomy

DR SUBHASH KAPILA

Japan has ploughed a predominant furrow in the history of the Asia Pacific within this century. From 1895 to 1945 it dominated the Asia-Pacific as the only non-Western Power, equal to and challenging the Western dominance both of European nations and the United States. With a brief intermission in its dominance after its military defeat in 1945, Japan once again surged ahead into prominence from the 1970s, this time economically. In the 1990s, Japan can be said to have reached the summit of economic power with its status as a global economic superpower - a status in which is implicit that it counts politically too in international affairs.

Shiro Saito, the author of this book has tackled the subject in an excellent and comprehensive manner with his rich background of being a lecturer in economics at Asia University, Tokyo, as a Japanese journalist with tenures in Singapore and London and a Visiting Research Fellow at Royal Institute of International Affairs, London.

In the course of his writing Saito-San admits that Japanese foreign policies so far have been reactive in nature to global events. He does, however, bring out that in each of the four phases above, Japan did attempt to create its own style of diplomacy. What emerges from the readings is that it was economic diplomacy that predominated political diplomacy — a widely accepted fact, too.

Coming back to the basic issue — the dichotomy in Japanese foreign policies i.e. the West versus Asia, Saito-San brings out in the 'Introduction' itself that this dichotomy has existed as a historical cleavage in Japanese national opinion right from the Meiji Restoration when an influential essay entitled "Quit Asia, Enter West" was brought out. Saito-San addresses the question again in the concluding chapter after a comprehensive survey and comes to the conclusion that "This inter-relationship" i.e. Japanese bi-directional foreign policy towards the Western World and the Asia-Pacific region,

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Japan at the Summit: Its Role in the Western Alliance and Asian-Pacific Cooperation. By Shiro Saito, London, Routledge for the Royal Institute of International Affairs, 1990. p. 188. £ 35.00, ISBN0-415-04271-2.

Dr. Subhash Kapila is a PhD from the University of Allahabad having specialised on Asia-Pacific Security.

"Can best be pictured as a tapestry, its horizontal threads to the West crossing its vertical threads to Asia. An over-arching approach combining the two directions might lead to the best policy orientations from the various possibilities available in Japan's intricate circumstances".

While the above summation of the author may be in keeping, beautifully, with the admirable Japanese traits of synthesis and harmony, and also contextual to the emerging pattern of inter-dependent international relationships, it seems that the answer to the question whether Japan is a Western Country in Asia or an Asian country in the West would be long in forthcoming. Summits are lonely and so is decision-making.

Overall, the book coming from a knowledgeable Japanese author provides a comprehensive coverage of Japan's international relationships and foreign policies. As a Japanese author he has been able to add more depth and perspicacity. A useful book for all students of Japanese foreign policies.

CORRECTION

The Editor regrets the following typographical errors in April-June 1994 issue of the Journal.

	For	*Read*
Contents Page Line 24 Page 234 Line 3 Page 234 Line 37	Commander V. Radhakrishnan	Commander N. Radhakrishnan

Review Article 5

Harmonising Defence and Development

LT GEN A M VOHRA PVSM, IA (RETD)

The authors observe that the nature of defence expenditure is considered non-developmental but essential on the part of government and proceed to analyse the role of defence expenditure in national economy by concentrating on three themes:-

(a) How does defence interact with other salient and relevant macro variables in the Indian context?

(b) The inter play of defence expenditure with other items of expenditure; economic services and provision of social wages.

(c) Efficient utilization and rationalisation of defence expenditure in the context of long term security policy.

The security environment in South Asia has been volatile since the inception of nation states in the region on the termination of the British Empire. While there is considerable improvement in Sino - Indian relations and a treaty for peace and tranquility has been signed (even if the authors point to India's long term apprehensions); relations with Pakistan have deteriorated in view of Pakistan's involvement in Kashmir. A state of tension continues to exist and expenditure on defence has continued to grow over the years.

The authors point out that, in the decade 1980-90, global defence expenditure grew at the rate of nearly 10 per cent per annum; it peaked in 1987 at $ 1012 billion and declined to nearly $ 850 billion in 1990 (due primarily to the break up of the Soviet Union). India has followed this trend in decline from 4.6 per cent of the GDP in 1987 to 2.75 per cent in 1992/93 (budget estimate). Figures are also given to show the low intensity of defence expenditure in India $ 7.6 per capita in 1991 against $ 20 in China and $ 27.7 in Pakistan, What is of greater consequence, however, is an inter related aspect of defence burden in the Indian context for period 1973/74 to 1989/90 which is tabulated in chapter 3 of the book. During this period-

(a) Governments mobilised more resources in the way of proportion of total budgetry expenditure to NDP (Net Domestic Product); 21.21 per cent in 73/74 to 39.80 per cent in 89/90.

Defence Versus Development: A Case Study of India. By DD Khanna and PN Mehrotra, New Delhi, INDUS, 1993, p. 189, Rs. 150/- ISBN 81-85182-93-0.

(b) The proportion of developmental expenditure increased from 11.89 per cent to 24.80 per cent in the above mentioned period. Non developmental expenditure increased from 9.3 per cent to 15 per cent.

(c) Expenditure on social and community services went up only marginally from 4.91 per cent to 7.10 per cent.

(d) Expenditure on economic services (infra structure) increased from 6.53 per cent to 12.18 per cent.

(e) In the element of non-developmental expenditure mentioned at (b) above, the defence burden has remained more or less stable and has infact come down slightly in the recent years and has remained frozen in real terms since 1988/89. It is the interest payment element which has gone up continuously that accounts for the increase in non-developmental expenditure.

An aspect of the structure of defence budget that is common knowledge among those interested in such matters is that a major portion of it is on operational costs (revenue) and, capital account, which provides for weapon systems, aircraft, naval fleet (apart from dockyards, land, construction work, rolling stock, as well as NCC and Rashtriya Rifles) has varied 7.85 per cent in 1979/80 to 29.30 per cent in 1989/90.

In view of the resources crunch, the increased costs of weapon systems and devaluation of the rupee, and in the interest of modernisation, there is an urgent need to restructure forces, reducing both manpower and holding of weapon systems. The authors observe that the ratio of revenue expenditure can be reduced only in a phased manner in the long run and that capital expenditure "can be efficiently managed, streamlined and rationalised".

The chapter on "Defence and Development Interaction in India" is a bit too technical for a lay reader not conversant with economic models but the conclusions are daunting, viz -

(a) Defence burden exerts a negative influence on "growth rate of output whether real or nominal"

(b) "In the savings equation, estimation under all the modes of estimation, the influence of defence burden in India is negative and significant".

The issues of defence expenditure and budgetry trade off, defence and external sector as well as macro-economic interaction are discussed. Conclusions are of considerable interest, eg,

(a) Share of defence is found to be at the cost of economic services and is at opportunity cost of development.

(b) Growth in defence expenditure and economic services has resulted in reduced expenditure on community and social services.

(c) Despite the growth of defence expenditure over the years, much of increase in non-developmental expenditure has been due to expenditure on interest payment.

(d) Defence burden affects the share of public sector in NDP and share of defence production positively.

(e) Foreign assistance takes away a part of the total export earnings and NDP in the form of debt servicing and acts as a constraint on over importing capacity.

(f) Increased per capita income leads to increased domestic consumption and a reduction in exports.

(g) A reduction in defence burden is likely to make more funds available for economic services, reduce the budget deficit and encourage the agriculture sectors performance.

Wishing for a relaxed security in the region a plea is made for "a major exercise in confidence building" in India's relations with Pakistan and China. Highly desirable as this is, India needs to institutionalise the processes for evolving national strategy and security policy so that defence forces can be rationally structured for a low level deterrence at the least cost to the exchequer : defence and development can thus coexist.

A useful case study which would be of interest to political leaders and will be profitable reading for senior service officers and bureaucrats.

Book Reviews

Why Nations Go to War. By John G. Stoessinger, *New York, Martin, 1990, p. 226, 5th Ed, ISBN 0-333-52486-1.*

John G. Stoessinger in his book 'Why nations go to war' attempts to understand the method if any, behind the madness of the horrific phenomenon of war. Through the case studies of some of the seven major wars of the 20th century he explores the causes of war and searches for a common thread. While, he admits in the preface to the existance of objective causes like the economic factor, he concludes that the subjective pattern i.e. the leader's personality is of paramount importance. His thesis is that a fatal flaw or ego weakness in a leader has spelled the difference between the outbreak of war and the maintenance of peace. The hubris and misperception of the leaders are responsible for dragging nations to war and thereby converting what could have been an avoidable "Christian Tragedy" into an inevitable "Greek Tragedy".

It is a very tempting analysis to subscribe to, especially in an environment where the end of the Cold War is attributed to the relentless pursuit and efforts of a sincere, strongwilled man, called Mikhail Gorbachev. The reviewer would agree with Stoessinger for discarding a "deterministic view of history", and emphasising the role of human will and endeavour in overcoming any adversarial reality. However, taken in isolation the subjective factor explains nothing by itself. It needs to be studied in a certain context, as today Thomas Carlyle's view "the history of the world is but the biography of great men" no longer holds water. Individual leaders embody and reflect the values, goals and attitudes of a particular era, society and times of which they are a part. For example Hitler's Holocaust merely gave a mandate to the existing though largely latent hatred for prosperous Jews prevalant amongst some Germans in a debt ridden post Versailles country. Similarly John F. Kennedy, General MacArthur, Nixon and Kissinger were not alone in their dislike of Vietcong Communists. A capitalist economy like that of the US, has some genuine and wellfounded fears from a politically (and potentially economically) thriving Communist Country. Every failure of Communism whether in Cuba, East Europe, China, USSR or Vietnam could be and was used as a vindication for the capitalist system. Moreover, one cannot overlook the role of "arms bazaar" and the military industrial complex in accelerating war. In such an environment one finds much truth in Von Clausewitz's classic theory, "War is a pursuit of politics by other means".

This book is plagued by another weakness which is probably a result of the authors attempt to encapsulate complex events in a few pages. Stoessinger's understanding appears very cosmetic here. No where is it more evident than in the fifth chapter where he discusses the Indo Pak wars of 1947-48, 1965, and 1971. To emphasise what he considers as "irreconciable" religious differences between the two communities, he points out, "Muslims observe strict silence in their Mosques, whereas Hindus play music in their temples ...." This assumption is ignorant of the cultural affinity between a Punjabi Muslim and a Punjabi Hindu and the marked cultural difference between a Hyderabadi Muslim and a Punjabi Muslim.

Despite the above flaws, it needs to be stressed that the book offers an important perspective on the role of the individual at a given moment of history. This insight can

prove very valuable if studied in a more holistic approach.

—Rina Kashyap
Senior Research Scholar, J.N.U.

Disarmament Agreements and Negotiations : The Economic Dimension Edited By Serge Sur, Hants, Dartmouth, *1991, p. 228, £ 30.00 ISBN 1-85521-257-9*

This book contains a collection of research papers on disarmament and development presented at a symposium in Leningrad, under the auspices o UNIDIR, in Jul 90. The theme is current, vital, and holds tremendous potential for the future of mankind. UNIDIR's unique initiative in entrusting the International Defence Economics Association (IDEA) with the project has produced invaluable analysis based on detailed inputs which renders the volume as a reference book for all 'think tanks' of developing and developed countries.

The editor has rightly included the responses to the papers presented, view-points projected and remedies suggested, which enhance the understanding and scope of the theme. The areas still to be researched have also been listed, viz, the extent of 'peace dividends' in different regions/countries ; relationship between alternative strategic options and their economic price ; possibilities and limits of the diversion from military to civil activities in different economic environments.

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

Understanding War : Essays on Clausewitz and the History of Military Power By Peter Paret, *New Jersey, Princeton 1992, p. 229, $ 24.95, ISBN 0-691-03199-1*

Carl von Clausewitz is often referred to in discussions on strategic interests and military policy. Frequently, as with Kant and Marx, these selfproclaimed though well meaning disciples are guilty of misinterpretation. A study of the 'Understanding War', is a 'must read' for those who use Clausewitz to bolster their argument. It is only fair to Clausewitz, given his scholastic effort, that he be spared the indignity of being attributed others prejudices.

Clausewitz was a perceptive observer and participant of his turbulent times. His experience in the Revolutionary Wars influenced his thought and made him suspect as a defender of the monarchical and conservative old order. Thus he lived a life remarkable for its emphasis on the courage of conviction. In the tradition of his mentor Scharnhorst and Gneisenau, Clausewitz pioneered the understanding of and incorporated the changes wrought by the Napoleonic Wars in military science. Evident from his epic 'On War' is the power of an incisive mind in command of history. A contemporary of the likes of Bulow and Jemini he acquired immortality on the posthumous publication of his magnum opus.

His central thesis, a signal contribution to war studies,was the relationship of military means to political ends, an idea of critical relevance in the Age of the Nuclear Deterrent. His theorising on 'Total War' has often been misrepresented when taken without reference to his insistence on the subservience of the military apparatus to political purpose.

The book, a compendium of essays, authored by Peter Paret, Professor of History

at Princeton, introduces Clausewitz in his historical setting of ideas and events. The first half, of which the essay 'Military Power' is recommended, provides the backdrop. Of the second half, the essay 'Clausewitz: Life and Thought' is inspiring.

This collection of essays, by the foremost interpreter of Clausewitz to today's soldiers, statesmen and intellectuals, shall prove rewarding for those who wish to quote Clausewitz with the conviction of comprehension.

— Capt Ali Ahmed Zaki

Science and the Navy : The History of the Office of Naval Research. By Harvey M. Sapolsky, *New Jersey, Princeton University, 1990, p 142 $ 24.95, ISBN 0-691-07547-5*

Mr Harvey M. Sapolsky examines in depth the origin and experience of the Office of the Naval Research, the first and for many years, the only federal agency to support a broad range of scientific work in the universities. There was hardly any scientific enterprise in America which the ONR was not centrally or constructively involved during the period between the Second World War and the Korean war.

A well presented book which would be of much interest to the scientists of the Ministry of Defence in India who are always in a difficulty to convince the importance of the Research and Development to the decision makers responsible for the allocation of funds.

— Captain R P Khanna AVSM
Indian Navy (Retd)

Warships 1992. Edited By Robert Gardiner, *London, Conway, 1992, p. 256, £ 24.00 ISBN 0-85177-603-5*

Warships 1992 contains 12 essays contributed by established and recognised authorities in the field of design, development and service history of combat ships. These authors have carried out an in-depth analysis of the history, capabilities and characteristics of various classes of ships along with photographs of the major navies of the world from mid nineteenth century to the present day.

The book has also some interesting features like the Naval Air Ships, Romanian Submarine Operations in the Second World War, the mutually destructive battle between the German raider- the Kormoran and the Australian light cruiser - the Sydney, and countering the magnetic mines 1939-45 and to the present.

— Captain R P Khanna AVSM
Indian Navy (Retd)

Contemporary Issues in Leadership, 3rd ed, Edited By William E. Rosenbach and Robert L. Taylor, *Boulder, Westview, 1993, p. 233, $ 49.95*

This is an excellent book that ought to be studied carefully not only by military men, leaders and the led but also by bureaucrats and those sponsoring or managing industry.

A few among the many points made out in this book are noted below: First, leadership is a means to ingrain the qualities of leadership in followers; second, it is the

means whereby,those who lead and those who follow engage in the task of influencing each other, bringing them together to make things happen that might not otherwise occur or to prevent things from happening that ordinarily would take place. Third, good and effective leadership inspires credibility. Fourth, prominent characteristics of good leaders are, honesty, competence, vision and inspiration.

Good leadership seeks to move upwards, in a spiral of self improvement, self knowledge, seizing and creating opportunities so that one can make things happen that would not otherwise have occurred. Good leaders do not bow down to failure; they analyse the reasons for failure, avoid such mistakes in their subsequent actions and achieve their goals sooner than later.

In essence, leaders are people who know who they are and know where they are going.

-- Colonel R. Rama Rao
AVSM, (Retd)

Defence and the Media in Time of Limited War. Edited By Peter R. Young, *London, Frank Cass, 1992, p. 281, £ 30.00 ISBN 0-7146-3478-6*

Enhanced capability of the electronic media to reach out across the globe with real-time news and hastily-composed views has accorded a dangerous complexion to the perennial conflict between media operators and the military commanders and indeed, their political authority. Institution of viable checks and balances between "public right to know" and "public or national interest" has, therefore, assumed greater importance, particularly in open democratic societies where the freedom of the press brooks no curbs.

At the International Conference on Defence and the Media in Time of Limited War, held at Brisbane during 3-5 April 1991, various aspects of the conflict were examined and case studies of the Vietnam, Northern Ireland, Falklands and the Gulf Wars were presented, which are reproduced in the book under review.

Bill Haydon - a career statesman and General Peter Gration, at the outset, underline the issues inherent in the Media-Military confrontation in the war scenario, namely, the context of limited war or conflict, inviolability of military security, the nature and content of public response or susceptibility to media projections, the strength and fallibility of inevitably circumscribed war reporters, the quality of reporting et al. The opening address and the keynote address give the genesis of the conflict supported by some very interesting and less-known back-references from the history of warfare.

— Maj Gen (Retd) S K Talwar

Low Intensity Conflict : Old Threats in a New World. Edited By Edwin G. Corr and Stephen Sloan, *Boulder, Westview, p. 317, $ 55.00 ISBN 0-8133-8593-8 (hc)*

After four decades of cold war and Super Power nuclear brinkmanship, the world now faces portentious threat of Low Intensity Conflicts in regions and nations across the globe. As Stephen Sloan has remarked: "Thus, though the Cold War has been rendered obsolete, there are still many wars to be fought, the war against terrorism and now the war against drugs." Further, we cannot discount or write off threat to world peace from resurgent communism and Islamic fundamentalism, or even racial confrontations.

In consonance with its global philosophy and its internal pressures, not the least a vociferous public opinion, the USA now seeks a re-definition of her global strategy and her peace-ensuring missions abroad.

The studies compiled in the book under review, broadly discuss the nature and manifestations of low-intensity flare-ups and the crisis management mechanism of the United States of America (bureaucratic, legal and academic) et al. Case studies of developments during the last two decades in Thailand, Ethiopia, Peru, Iran and Afghanistan have been included which project the diverse manifestations of low intensity conflicts, as well as the nature of USA's involvement there-in. Though, essentially, - directed at the imperatives for America, appropriate response to such a challenge would concern all nations and societies.

— Maj Gen S K Talwar (Retd)

Para : Fifty Years of the Parachute Regiment. By Peter Harclerode, London, *Arms and Armour, 1992, p. 415, £ 20.00, ISBN 1-85409-097-6*

The British Parachute Regiment, which celebrated its 50th anniversary two years ago, won for itself, within a very short period of its raising, fame as an elite force and a place of honour amongst the foremost regiments of the British Army. As far back as 1947 the then Colonel Commandant Field Marshal The Viscount Montgomery wrote of them in his foreword to the book *The Red Beret* : "What manner of men are these? They are in fact men apart -every man an emepror."

The Parachute Regiment has always been very fortunate in having extremely competent authors to chronicle their brilliant record and stirring deeds. Peter Harclerode's book keeps up this tradition and follows in every way the high standard set by Hilary Saunders in his book *The Red Beret.* This new book is an excellent comprehensive history of the fifty glorious years of the Parachute Regiment. In his simple and very readable narrative the author preserves much of the drama of the events and, in all, it is a stirring story well told.

In this book there is a deficiency which cannot be passed over. It appears that authors who wrote military history books soon after the Second World War seem to have correctly appreciated the importance and value of good clear maps and sketches for a clearer understanding of battle plans and to follow the actions of various units on the ground. The intervening years of peace and perhaps the increased costs of printing appears to have devalued the importance of this requirement.

What is bound to be of great interest to Indian readers is the excellent coverage given in this book to the wartime Indian Airborne Forces and to the Indian Parachute Regiment. It has a super account of the Battle of Shangshak, about which important action very little has otherwise been written. It was about this battle that General Sir William Slim said in his Special Order of the Day - "Your parachute brigade bore the first brunt of the enemy's powerful flanking attack, and by their staunchness gave the garrison of Imphal the vital time required to adjust their defences. To the officers and men of the 50th Parachute Brigade I send my congratulations."

The author also gives a detailed account of the reorganisation of the Indian Airborne Division at the end of the War. There are, however, a couple of minor errors.

In the book it is stated 4th Battalian 6th Rajputana Rifles was the only battalion to remain on in the Division. Actually the 6th Battalion 16th Punjab Regiment also stayed on though it was redesignated as the 3rd Battalion 16th Punjab Regiment. The 3rd Battalion 7th Rajput Regiment is mentioned as being the "Duke of Cornwall's own." In the Indian Army list of the time it is shown as the "Duke of Connaught's Own." Also on page 170 of the book 1st Battalion Assam Rifles is stated to have been holding Jessami and Kharasom. The newly raised 1st Battalion of the Assam Regiment was located at Jessami, fought there and earned their spurs.

Peter Harclerode's fine book brings to life events that many have lived through and it will no doubt refurbish fading memories. For the younger generation it will show what it takes in courage and sacrifice to create an elite force.

— Maj General S C Sinha PVSM (Retd)

Inside / Outside " International Relations as Political Theory. By R.B.J. Walker, Cambridge, *Cambridge Univ, 1993, p. 233, £ 35.00 (hb), £ 13.95 (pb) ISBN 0-521-42119-5.*

In this book the original analysis of the relationship between the twentieth - century theories of international relations, and the political theory of civil society since the early modern period have been given in detail. The author has viewed theories of international relations both as an ideological expression of the modern state, and as a clear indications of the difficulties of thinking about world politics characterised by profound spatiotemporal accelerations.

The author has argued that international theories should be seen, as aspects of contemporary world politics than the explanations of the world politics. In the international relations as political theory the author says, "despite the bewilderment, this experience is now richly inscribed in the contemporary imagination. Discources of military strategy express worries about contracting response times and instantaneous decisions rather than the logistics of extended territorial spaces."

— Col P K Vasudeva (Retd)

War in International Society : a Study in International Sociology By Evan Luard, *London Tauris, 1986, p. 468, 29.50 ISBN I 85043-012-8.*

Wars have proved to be a part of normal language of international relationship. These have been fought over dynastic succession, religious convertism, assertion of sovereignty and territorial integrity, nationalist expansionism and lastly on ideological differences. These have been analysed in great detail and well tabulated for the last six centuries till 1984 encompassing scenarios mainly in Europe and also peripheral coverage across the world. The short and long term issues that led to war, the motives of the states/countries, the international environment have been dwelt upon at length alongwith the way decisions were made and the profitability of war.

The linguistic fertility and the erudition displayed concerning the last six hundred years of war by the author have given additional impetus for a student of international sociology to study the book.

— Maj General J N Goel (Retd)

The Strategic Revolution : Thoughts for the Twenty-First Century. By Neville Brown, *London, Brassey's (UK), 1992, p. 248, £ 22.50 ISBN 0 08 040721 8*

Neville Brown is a well respected name amongst discriminate and well informed military specialists. His international security background, long experience in defence journalism and fellowship at renowned security studies institutes, qualify him eminently for writing on this important topic, 'Strategy in the next Century'.

The Post Cold War World is introducing a new technological era in modern war fighting. Its impact will be immense in the future as The Gulf War of 1990-91 so clearly demonstrated. This book attempts to chart a course and indicate directions for the future. The book attempts to encompass a very wide spectrum of conflict and its chapters delve deep into future possibilities.

Brown accepts the paradigmatic changes brought about by the demise of the Soviet empire. He also accepts that it is not an era of "Indivisible Peace". What then are the new issues of tomorrow? He reexamines Mackinder's `heartland theory' and accepts its relevance for the future and the need for a stable relationship between Moscow and the West.

What makes the book fascinating are the later chapters. Brown examines new factors that will affect international security in the future. These are climate, ecology and what he terms as the new geo-politics. From an examination of these factors, he analyses the possibilities of future strategy and suggests measures for the 'defence of peace'. Finally he looks at planetary horizons including strategic arms reductions and space defence systems.

In purely strategic terms much has changed in the last two years. Yet, the book retains its freshness because of its new ideas. It is not often that one can recommend a book so unequivocally. The writing is crisp, the ideas clear and the size of just over 200 pages makes for easy reading. Brassey's have as always done a marvellous editing and production job. All serious students of military strategy should read it as a guide to an increasingly uncertain strategic future.

— Maj Gen D Banerjee, AVSM

Asian Security 1993-94. Compiled By The Research Institute for Peace and Security, *London, Brassey's (UK), 1993, p. 254, £ 24.00 ISBN 1 85753 028 4*

Brassey's Asian Security edited by Professor Kosaka Masataka and Sidney Breadman is an Year Book on security which is very well researched, extremely well reasoned out and appropriately and briefly worded.

The book is recommended to all those who want to have an insight into Asian Security from University to National level and should find its rightful place in all good libraries.

— Air Cmde S K Bhardwaj (Retd)

Peace & World Security Studies : A Curriculum Guide (6th Ed.). Edited By Michael T. Klare, *London, Lynee Rienner, 1994, p.424, $ 22.00, ISBN 1-55587-432-0*

Coming as a sequel to its previous editions dealing with Peace and World Order till eighties, this edition covers the subject in the post cold war era under the changed

global equations. It is a collection of 14 meticulously selected essays written by noted experts on the subjects that contribute towards achieving the global peace and security, with the aim of providing readers with an intellectual insight to the problem and suggestions to the teaching and student organisations in enhancing their vision by supplemental reading. It thus serves as a curriculum guide to those engaged in advance teaching and research on this subject.

— Col Ramesh Davesar

Keyguide to Information Sources in Strategic Studies. By Ken Booth and Eric Herring, *London, Mansell, 1994, p. 242, £ 55.00 ISBN 0-7201-1960-X*

A student of strategic studies today is bewildered by the vast volume of published material on the subject and its complex nature. This is in spite of the fact that it is comparatively a new discipline in international affairs which gained acceptance as a distinct subject in the late fifties. But with the tremendous advances in the means of waging war, development of nuclear weapons and capabilities to destroy the world many times over, security of nations became a paramount concern. It is intimately linked with national and international politics and covers a wide field in which a number of subjects overlap. It is affected by history, geography, economics, philosophy and ethics.

Thus a multidisciplinary approach is essential and a student finds it extremely difficult to collect information. Ken Booth & Eric Herring have brought out a very useful book which should be a boon for not only students but also teachers of strategic studies. It is a well arranged book, Part I is a keyguide containing historical background and current debate on the role of strategic studies. It discusses the types & organisation of information in the field. Part II gives the details of reference material while organisations across the world which can provide assistance on the subject are listed in Part III. The last two parts are of particular interest to teachers. These should help them in preparing reading lists and advising students. It is thus a useful book which should be readily available in all research institutes/centres.

-- Air Mshl M L Sethi, PVSM, AVSM (Retd)

Security and the CSCE Process : The Stockholm Conference and Beyond By John Freeman, *England, Macmillan, 1991, p. 222, £ 45.00, ISBN 0-333-48945-4*

An informative book on the painstaking work at the various conferences, starting from Helinski, through Madrid to Stockholm from 1973 onwards, to achieve security and cooperation in Europe.

Written by John Freeman of the British Foreign Service, who was a first secretary at Berlin and was a member of U.K delegation at Stockholm. His account is therefore based on intimate knowledge of the subject.

The first chapter on Post War Europe — and the fears of the Russians is aptly covered by the quotation from Stalin *"Whoever occupies a territory imposes on it his own social system. Every one imposes his own system as far as his army can reach."*

The Russians were in Berlin and thus controlled eastern Europe.

In 1968, Willy Brandt became Chancellor and started Ostpolitic. The signing of the N.P.T by the FRG in Nov 1969, led to reduction of fear in Russians and bilateral talks in Moscow. The process was further helped by the meeting of the East European Foreign ministers at Prague who suggested an all European conference, thus leading to the three stages of CSCE at Helsinki, Madrid and Stockholm.

A study of great merit, for our disarmament negotiaters — it brings out the need for patient hard work.

-- Maj General Partap Narain (Retd)

S.D.I. and the Alternatives. By Simon P. Worden, *Washington DC, National Defence University, 1991, p. 259, $ 8.50*

An excellent, thought provoking book, by a Scientist, Col of the Airforce, which goes into various aspects of Strategic Defence, ending with the situation arising after the demise of the U.S.S.R.

The importance of the use of space, according to the author, requires it's control. It's use for hitting the important C31, airfields and other ground targets must be realised. For victory it is not only the numbers and courage, but there is need of skills and discipline. The ability to destroy aircraft before take off, would enhance defence capability.

Various options open to the major powers, and their costs have also been discussed in detail. Use of ground based intercepters at $ 3 m each, including costs of ten years maintenance, and cost of putting one Kg into space of $ 30,000 million are of interest. The escalating costs of systems A, B and C — each getting more complex to deal with the counter measures, runs into billions. Option A, for example costing $ 66 m — would cost $ 192 m to counter it. B, costing 82 m — would need defence worth $ 900 m.

— Maj Gen Partap Narain (Retd)

Under Fire : An American Story. By Oliver D. North with William Novak, *London, Fontana, 1992, p. 462, £ 6.99, ISBN 0-00-637840-4.*

Not actually an American Story; this however is indeed Oliver's story. It deals mostly with his wheeling and dealing during his stint with the National Security Council of the United-States. Having been thrown into the media glare, after the Iran-Contra scandal, and having gained notoriety or fame, depending upon how one looks at the entire sordid affair; he has, in this book, taken the opportunity of also baring it all, that is, his entire career in the United States Marine Corps, the way the wheels of power turn on Capitol Hill, his family life et al! He has gone about this in his much celebrated under cover style; he hired a writer, William Novak, to whom he dictated in a hush hush cloak and dagger atmosphere.

Bottom Line - Read and give the devil in the soldier his due.

— Lt Col A K Sharma

The United States and Vietnam 1787-1941. By Robert Hoppins Miller, *Washington DC, National Defence University, 1990, p. 324, £ 10*

Any mention of USA-Vietnam relations brings into focus the Vietnam War. This book, however, is about USA-Vietnam relations during the period 1787-1941. Author is a career diplomat and presents the early history of US-Vietnam relations in depth.

Readers who are keen to understand the US-Vietnam relations should first read the modern history culminating in Vietnam War and then read this book for better understanding.

— Lt Col Daljeet Singh MSc, psc (Retd)

From Occupation to Cooperation: The United States and United Germany in a Changing World Order. Edited By Steven Muller and Gebhard Schweigler, *New York, Norton, 1992, p. 288, £ 17.95 ISBN 0-393-03359-7.*

This book is a collection of eight thought provoking essays written by eminent scholars on how America and Germany should collaborate on regional and global problems. It has four major themes and each one is anlaysed by one American and one German. These range from strategic partnership, economic interplays, vision of leadership and the constraints for the leaders on both sides of the Atlantic. These essays attempt to evaluate the new emerging relationship between both the countries due to the vast politico-geographic changes like reunification of Germany and fragmentation of the Soviet Union.

The incisive analysis of perception of both countries their national sensitivities and their areas of interest will continue to help each other in arriving at balanced decisions. The "partnership in leadership" between Americans and Germans, to a large extent will determine the future of the European Community.

An interesting book.

— Maj General J N Goel (Retd)

Betrayal at Pearl Harbor : How Churchill Lured Roosevelt into World War II. By James Rusbridger and Eric Nave, *New York, Simon and Schuster, 1991, p. 302, $ 112.00, ISBN 0-671-79231-8*

National interests transcend all realms of morality. Stratagem, deliberate deceit, withholding of vital information about and enemy which may result in collosal material, moral and psychological damage are practised widely by enemies & friends alike. Interpretation of available material like breakage of super secret Japanese code JN 25 by Britishers indicates convincingly but not conclusively that the intimation of

impending attack on Pearl Harbour on 07 Dec 1941 was denied to President Roosevelt by no other person than Churchill himslef. Churchill thus succeeded in dragging "the United States in War" as revealed to his son Rudolph as early as 18 May 1940.

An interesting, authentic and a fascinating book on intrigues in high places.

— Maj General J N Goel (Retd)

The Reagan Wars : A Constitutional Perspective on War Powers and the Presidency. By David Locke Hall, *Colorado, Westview, 1991, p. 279, $ 57.50, ISBN 0-8133-1198-5*

The author in this treatise has thrashed out threadbare the war making powers of the American President as the Chief Executive and Commander-in-Chief of the armed forces without waiting for the formal declaration of war by the Congress which is constitutionally valid and legally justifiable. The tug-of-war on the issue between the Presidency and the Congress in the tactical and strategic sense has been well established and its emergence as a political equilibrium has reproved the theory of checks and balances in a democratic society. All the four instances of Mr. Reagan's armed interventions in Lebanon (1982-84), Grenada (1983), Libya (1986) and the Perisan Gulf (1987-88) have been very aptly and ably brought out within the framework of the American Constitution and without transgression of authority.

The subject matter is very well researched and lucidly presented and adequately supported by notes and references at the end of each chapter besides exhaustive quotations in the text itself. The utility of the book is further enhanced by the illustrative maps.

— Air Cmde S K Bhardwaj
(Retd)

Rethinking Camelot: JFK, The Vietnam War, and U.S. Political Culture. By Noam Chomsky, *Bostan, South end, 1993, p. 172, $ 14.00, ISBN 0-89608-458-2*

Noam Chomsky is perhaps one of the most outstanding radical intellectuals in the US. In this book by drawing on records that have been made public and pronouncements of many people in position at the time of the Vietnam War, Chomsky very convincingly argues that contrary to the Memorists portrayal that President J F Kennedy wanted to disengage from Vietnam prior to his assassination, facts state otherwise. In fact he asserts that JFK was very much a part of the establishment which made victory a pre-condition for withdrawal. Though many JFK admirers tend to suggest that President Johnson was the architect of the Vietnam, Chomsky points out that LBJ was really a prisoner of senior advisors personally chosen by Kennedy and it was this group which influenced direction of the war till it started to go away.

The ghost of Vietnam still haunts many in the US not just because of the military defeat but the displacement of the US from the pedestal of moral superiority and the principles that it stood for. The Vietnamese were also an affront to US machismo and many present day assertions of the US administration are essentially a manifestation of a similar syndrome.

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

Miracle in Korea : The Evacuation of X Corps From the Hungnam Beachhead. By Glenn C. Cowart Columbia, *University of South Carolina, 1992, p. 136, $ 29.95, ISBN 0-87249-829-8*

"Miracle in Korea" is a comprehensive and well-documented battle account of 3 Infantry Division. The usefulness of the study, however, extends to the in-depth review of American and Chinese strategy, doctrine, force levels and higher commands for the War in Korea. "Almost every aspect of the early days of the Korean conflict was characterised by make-do arrangements reflecting our nations un-preparedness for war." It soon became evident, however, that one of the most serious problems facing the units assigned to X Corps would be the personality of the corps commander."

The Korean War of 1950-51 will ever be an enthralling field of study for students of warfare. The Miracle in Korea contributes to this in no mean degree.

— Maj General S K Talwar (Retd)

The Crisis of Leninism and the Decline of the Left : The Revolutions of 1989. Edited By Daniel Chirot, *Seattle, Univ of Washington, 1991, p. 245, $ 14.95*

There have been several treatises on the collapse of communism . In this book nine US scholars present their reasons for the demise of Leninism Marxism and attempt to postulate whether Liberal Democratic capitalism of the western variety is now all set to replace the force that was the 'Left'. By and large there is a consensus that the breakdown was the result of an irrelevant ideology being grafted on countries along with technologies which were polluting, wasteful, energy intensive and inflexible. Change could not be managed because of lack of experience and stratified beliefs. As input - output factors became progressively worse, East European references posited only empty posturing, lies and corruption, and hence caved in under the weight of their own contradiction. Gorbachev again failed because he only tried to dismantle the odious mechanisms of communism without establishing any new institutions.

All authors are also more or less agreed that the disintegration of the Soviet Union does not necessarily signal an unequivocal US victory as many characteristics of the latter, like unemployment, chronic deficits, unbalanced fiscal policies and resort to easy money are all signs of a national decline. Hence the redesigns of the future are somewhat deffused and nebulous.

The view on China is that the Chinese brand of communism had greater legitimacy because it represented peasant nationalism. Intellectuals in China, however, have always had disdain for the peasantry and hence any challenge posed to the regime on moral and material grounds will be within the traditional framework of co-existence of scholars with the State. So Pro Democracy Movements of the Tinianmen Square variety are no real threat to the Chinese Communist regime.

The book is somewhat out of date as much of what has been said has been overtaken by events stemming from the break up of the Soviet Union. Nevertheless it would still be of immense interest to students of political scene.

— Air Marshal KD Chadha PVSM, AVSM, VM (Retd)

Ablaze : The Story of Chernobyl. By Piers Paul Read, *London, Secker & Warburg, 1993, p. 478, £ 16.99 ISBN 0-436-40963-1*

On 20th April 1986, the nuclear reactor at the fourth unit of V.I. Lenin Power

Station at Chernobyl exploded. It was a catastrophe of historic proportions. Many millions have suffered & continue to suffer. Parts of Russia, Belorussia & the Ukraine are uninhabitable.

Equally significant is the effect on our attitude towards nuclear power. Confidence was already shaken by the accident at Three Mile Island, after which no nulcear power stations were commissioned in the U.S.A. Chernobyl accident resulted in closing down of about 40 reactors in the Soviet Union.

However, an ever-increasing demand for electricity, together with limited reserves of gas, coal, and oil and the growing evidence of the damage done to the environment, rejection of nuclear power itself, is also problematic. For this reason, it is important to understand the full implications of Chernobyl.

Several books have been written on the accident, but none by a Western writer. The author interviewed the personalities involved. He also made use of declassification of nuclear information in the former Soviet Union, as well as documents pertaining to the trial.

— Maj Gen Ram Nath S M

The Collapse of the Soviet Empire, Vol. I, Managing the Regional Fall Out, Edited by Trevor Taylor, *London, Royal Institute of International Affairs, 1992, p. 189, £ 10.50 ISBN 0905031 54 7*

The book under review has emerged from a two year research project organised in 1991 by the two Institutes mentioned above. It is a collection of eleven articles by noted British, Japanese (and one French) academics and research scholars. The book is set in three parts covering the changes in the former Soviet Union (FSU), the regional consequences in Europe and the Far East and perceptions of security after the Cold War.

While much about European security architecture including perceptions is widely available, what would be of interest to any scholar of the Asia Pacific region is the last article "Japanese Perceptions of the New Security Situation" by Prof Seiza Buro Sato. The author while surveying the new security threats emerging has called for restructuring the Japanese defence system and a fundamental shift in Japanese national security policy.

-- Dr Subhash Kapila

Troubled Friendships : Moscow's Third World Ventures, Edited By Margot Light, *London, British Academic, 1993, p. 225, £ 39.50 ISBN 1-85043-649 5*

The editor has introduced the subject and concluded the same whereas the six case studies, India, Angola, Vietnam, Ethopia, Syria, Cuba, Chapter II to VII, have been contributed by other experts, Peter Duncan, Igor Belikor, Victor Funnell, Robert Patman, Efram Karsh and Peter Shearman respectively. Of the 16 countries the USSR entered into treaty of friendship, only six have been picked out for special study. India due to strategic balance in Sino Soviet conflict and Soviet support against Pakistan, Angola for spurring up Marxist movement and transition to socialism and a focal point in Africa for Soviet socialism, Ethopia for Soviet triumph in Ogaden, Syria for eradicating western influence and last but not the least "Best friend" Cuba as test case for

super power rivalry during and because of Cold War. After the disintegration of USSR in end-1991 the future foreign policies of the successor states, especially Russia will be dictated by the principles of bilateralism, mutuality and Russian economic needs and not by ideology or perceived needs of the Soviet allies.

The utility of the book has been greatly enhanced by exhaustive notes at the end of each chapter and a comprehensive index at the end.

This book is recommended for the students of foreign affairs and geo-politics.

— Air Cmde S K Bhardwaj (Retd)

Six Years That Shook the World : Perestroika - The Impossible Project, By Rachel Walker, *Manchester, Manchester Univ, 1993, p. 312, £ 35.00, ISBN 0 7190 3286 5*

Mikhail Gorbachev on coming to power in March 1985, launched his reform programme, more familiarly known to the world by the term Perestroika, and the six years that he stayed in power became momentous for USSR; as also for the whole world ; it not only ended the cold war but also destroyed the communist systems in Eastern European satellite states and in the U.S.S.R itself. Its after effects would continue to be felt for quite an unforseeable future; its outcome still seems to remain uncertain and no body with certainty can predict as to how it will end.

The book gives an analytical study as to how an apparently robust and well controlled communist system built and nurtured for over 70 years, proved so fragile and crumbled like a house of cards once the forces generated by perestroika and glasnost took over and of Gorbachev's inability to harness control and guide his well meaning reforms in face of such tremendous inner pressures ultimately led to the destruction of communist system and disintegration of the USSR itself.

— Lt Col Y P Gupta (Retd)

Marxism and Reform in China, By Su Shaozhi, *Nottingham, Spokesman, 1993, p. 173. £ 13.95, ISBN 0-85-124-547-1*

Marxism & reform in China is a collection of scholarly articles depicting vividly four decades of Peoples Republic of China, bringing under sharp focus every aspect of the nation state - its people, politics, economy, technology, health, past and future projections, supporting his observations with appropriate and apt facts & figures.

Author's vast knowledge by virtue of his experience as a research scholar, is encapsuled in sixteen very systematically and chronologically arranged chapters. Change is inevitable in nature's scheme of universe, salient features of which have been brilliantly enunciated by the author - from the evolution of the republic in its present form to its deficiencies decay, dictatorial suppression of democratic urges and aspirations of the people, the pangs of transition of an ultimate free society - the resultant/ residual confusion notwithstanding. The book enlightens the socio-political fabric with a note of optimism even in the deepest and darkest crevices.

A desirable & digestible capsule for quick learning, easy reference and authoritative source material; this informative book is considered a must for centres of learning, students of Marxism, Leninism and sinologists; perhaps the smallest book on the largest country & its contemporary history, A crisp reading of an otherwise dry subject.

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— Air Vice Marshal S S Malhotra, AVSM, VM

Chinese Democracy and the Crisis of 1989 : Chinese and American Reflections. Edited By Roger V. Des *Forges and Others, Albany, State Univ of New York, 1993, p. 371, $ 64.50, ISBN 0-7914-1269-5*

An in depth study of the Chinese population through various times, their social, political, and economical reasons, during which dissent took root. The authors have stressed in their meticulously sifted articles that democracy has always been woven in the fabric of Chinese society, including, the beginning and remainder part of even the dynastic rules in one or other form. The authors have shown a clear comprehension of Chinese people and their psyche. The crisis of 1989 has been brought out in detailed and interesting manner.A very readable book.

— Lt Col Anil Sharma

Economic Development in Chinese Societies : Models and Experiences, Edited By Y.C. Jao and Others, *Hong Kong, Hong Kong Univ, 1989, p. 290, $ 25.00, ISBN 962 209 235 7*

This collection of seventeen professional papers presented at a seminar critically examine the problems of Economic growth with particular reference to societal perspectives/ethos, in respect of Newly Industrialised Countries (NICS) and less Developed countries (LDCS) of Asia Pacific Region. The statistical data provided is presented so logically that the remedies/recommendations flow/follow automatically.

The papers and their presentations not only lend themselves to easy comprehension but contain a wealth of information, in the form of a ready reckoner for quick reference by students & scholars. Excellently produced and reasonably priced collapsible edition should find a ready acceptance by students, universities, libraries and all others connected with management of developing economies, applied developmental studies related to industrialisation and international trade/inter-dependence/co-operation.

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

China, The United States, and the Soviet Union : Tripolarity and Policy Making in the Cold War. Edited By Robert S.Ross, *Armonk, Sharpe, 1993, p. 204, $ 18.95, ISBN 1-56324-254-0*

It is a firm belief of American thinkers that during the Cold War there was considerable interdependence between USA, Soviet Union and China. The word used for this three way interdependence is Tripolarity. Indeed it is emphatically stated that strategic relationship among these three states was 'more vital than any other three way relationship in international politics during the post-WWII era'.

This perception gained sharper focus in early 70's. Henry Kissinger and Nixon already understood the importance of China as a part of the strategy to contain Soviet Union. Soviet - Indian Friendship Treaty signed on 9 Aug 1971 further accelerated the Sino-American congruence of interest. The book deals wih a maize of factors and circumstances that lead to emergence of close relationship between and arch Communist nation (China) and the greatest democracy. Some go to the extent of holding the view that the interplay of political, economic and social influences generated by this tripolarity was so great as to cause the disintegration of Soviet Union and prove a major setback to the communist movement.

Though apparently this could be termed as overestimation of China's influence in Cold war policy making, yet the arguments advanced in the book are forceful and compelling.

— Lt Gen S P M Tripathi PVSM

Contemporary Chinese Politics and Foreign Policy. Edited By Naranarayan Das, *New Delhi, Radiant, 1989, p. 206, Rs. 200/-, ISBN 81-7027-125-8*

A collection of 13 papers presented at a seminar on 'East Asia : Development, Security and Diplomacy' held at the Jawahar Lal Nehru University New Delhi from 9 to 11 Mar 87, this short book deals largely with economic liberalisation brought about by Deng Xiaoping after Mao's death, and with Chinese security concerns.

Along with bringing in prosperity and progress by emphasizing on the four modernisations i.e agriculture, industry, national defence, and science and technology, Deng has been stressing on retaining the primacy of party leadership, Marxist ideology and in building up and retaining democratic socialism, Libralisation of sociopolitical thought and the allowing in of 'Bourgeois Liberalisation' is being strenuously resisted; witness the heavy hand with which student demonstrations in favour of democratisation were put down. Part 2 considers Chinese security concerns with the USA, the erstwhile USSR, and with its Asian Pacific neighbours. In the last essay, Prof Mira Sinha Bhattacharjea analyses and discusses China's strategy for the delimitation of its boundaries, in the light of the settlement arrived at with Myanmar, and puts across an extremely interesting viewpoint.

The writers are all eminent academicians who have been studying and writing on China and on economic and security concerns. Though somewhat dated by events since 1987 in the USSR and the international arena, it is an extremely readable and interesting book which would be of use to a student of Chinese affairs.

— Maj General Jasbir Singh (Retd)

Japan's International Relations. By Takashi Inoguchi, *London, Pinter, 1991, p. 190, $ 40.00, ISBN 0-8133-1424-0*

The book is an attempt to anlayze as to how Japan conceives and conducts its international relations at a time of great upheaval in the late twentieth century. Japan has always been confronted by the formidable challenges from within and outside the country in the growth of its economic power. The author has brought out that on the whole Japan has demonstrated a deftness in adapting to international changes, whether of economic nature or concerning security. It is because its energy has been focussed on technological, manufacturing, commercial, and financial activities without shouldering international responsibilities.

The author places in context the issues of economic dynamism, market liberalisation, protectionism, and bloc formation with special reference to Japan's interactions with Pacific Asia.

The book will be found very useful for all who want to know the success story of Japan in the emerging global economy where Japan is playing a decisive role.

— Col. P K Vasudeva (Retd)

The Gulf Conflict 1990-1991 : Diplomacy and War in the New World Order. By Lawrence Freedman and Efraim Karsh, *London, Faber, p. 504, £ 20.00, ISBN 0-571-16457-9*

The credentials of the author's, Freedman and Karsh, Head of Department and Reader respectively in the Department of War Studies at King's College London appear to be ample in recommending the book. In the event the credentials that reflect their cultural roots and academic background hold them hostage.

The book is a lucid exposition of the argument that Saddam's assault on that sacred tenet of international law - sovereignty - had to be reversed. In doing so the West orchestrated events to climax in war and in the deneument took adequate care to ensure not to tread on that other sacrosanct principle - non interference in anothers internal affairs. The West appropriating to itself the halo of righteous action set the agenda for the New World Order.

In Saddam's psychological profile the dirty tricks department found the perfect protagonist. Saddam made the publicity divisions task easier in keeping the military - industrial complex's show on the road. With Bush as director, costarring Powell and Schwarzkopf, produced by CNN and bankrolled by the Sheikhs, this venture nonpareil titled 'Saddam's Folly' has acquired an excellent postdated script in 'The Gulf Conflict, 1990-91.'

With that said, the book is admittedly essential reading. It is chronological, with an intelligent chapterwise layout and its jargon is ideal for the armchair strategist.

— Capt Ali Ahmed Zaki

Illusions of Triumph : An Arab View of the Gulf War. By Mohamed Heikal, *London, Harper Collins, 1993, p. 457, 7.99 £ ISBN 0-00-637945-1.*

There has been a subject of writing by all and sundry on how the Gulf War was fought and won - or was it won at all!!! There has been very little information on what precipitated matters and prompted Saddam Hussain to embark on a course of adventurism. There is perhaps no Arab commentator better qualified than Heikal who could have provided an authentic background on why things turned out the way they did in the Gulf from August 1990 to March 1991.

The wrong choice between 'unacceptable choices' was made according to Heikal because of a paralysis of decision making from which the Arab world has long suffered in the absence of an institutional framework. This was as most regimes were headed by monarchies or dictators weilding absolute power. The greatest disappointment to the Arab world was that an Arab solution was not found to a purely Arab problem.

Heikal's account is discerning and his analyses are a welcome departure from the stereotypes that had almost become a monolouge on opinions relating to the war.

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

The Middle East Military Balance : 1992-1993. Edited By Shlomo Gazit and others, *Jaffee Centre for Strategic Studies, 1993, p. 514, $ 69.50, ISBN 965-459-003-4*

The book under review is a collection of well researched contributions by eminent scholars covering strategic developments and the status of the main Middle East Armies

following the Iraqi occuption of Kuwait and Op Desert Storm.

A very interesting and useful reference book for students/researchers of the Middle East Scenario and the emerging post cold war strategic environment.

— Lt Gen P E Menon, PVSM (Retd)

Nasser : The Final Years. By Abdel Magid Farid, *Reading, Garnet, 1994, p. 221, £ 24.95 ISBN 0-86372-174-5*

Egypt's defeat in the June 1967 war was swift and shattering with Sinai lost, Suez canal closed, airforce destroyed and army disintegrated. The most powerful Arab country was left to beg for food and protection. The Soviet friends were sulking at their best weapons having ended up in the research establishments of U.S.A.

Following massive demonstration of support in Cairo, Baghdad, Beirut and Damascus on June 9 & 10, Nasser decided to withdraw the resignation he had announced on June 9, 1967. Working largely on the strength of the one asset still available to him -- the support of the Arab masses, he started to pick up the pieces and proceeded to meticulously rebuild his ruined edifice. His priorities were clear - defence against the threat of Israeli air attack, shoring up the economy, rebuilding a fighting machine capable of winning back Sinai and ensuring that the Arabs remain deadfast in rejection of separate peace treaties with Israel.

For three years till his death in Sept 1970 Nasser worked ceaselessly for the achievement of these goals. Except for an attempted coup by Marshal Abdel Hakim Amer which was easily suppressed. There were no serious problem on the domestic front. The differences, disputes and rivalries which divided the Arab leaders presented a major hurdle. But with generous Soviet and broad Arab support he succeeeded in putting Egypt back on its feet and despite all their divisions the Arabs remained united in rejecting US-Israeli overtures for individual peace treaties.

In the present volume Abdel Magid Farid who was the Secretary General of the Egyptian Presidency throughout the period, presents the record of some of the most crucial meetings which Nasser and his emissaries held with Soviet and Arab leaders as well as with members of the top echelons of Egyptian govt. Nasser's meetings with Podgorny in Cairo; Aref meeting with Brezhnev & Kosygin in Moscow and the Khartoum summit of Aug-Sep 67 stand out as the most important.

An excellent book which will be of great value for students of Middle East affairs.

-- J P Sharma
Former Additional Secretary

Arabs & Israel : For Beginners. By Ron David, *New York, Writers and Readers, 1993, p. 210, $ 9.95, ISBN 0-86316-161-8*

The book on its cover page itself indicates that it is for beginners. The author narrates, in simple and 'story style' language, the history of middle eastern countries that surround Israel and their influence on the course of modern Israel's history.

The disintegration of the Ottoman Empire started with the Young Turk Revolution of 1908, although its stated aims were to strengthen the Empire, militarily and

morally; give equal rights to all religions and ethnic groups; to restore the Constitution as framed during the regime of Sultan Abdul Hamid II in 1876; and finally to get Abdul Hamid out of power. The Revolution led to several countries of the then Turkish Empire to complete the transition from subject countries to parliamentary democracies, but still under Turkish overlordship.

World War I, however, radically altered the frontiers of West Asian countries of the Ottoman Empire and with that, to some extent at least, the composition of the population of some countries of the region. Turkey during World War I was an ally of Germany. Britain realised that the war provided as excellent opportunity for it to dismantle the Ottoman Empire and thereafter, by stages, strengthen its own hold on countries of the region.

Sir Henry McMahon, then Britain's High Commissioner in Cairo, persuaded Hashemite Arab Leader, Sharif Hussain, to start a revolt against Ottoman rule and secure freedom for their land. Hussein, after getting a promise that Britain would fully support Arab demands for independence from Turkish rule, started the movement for Arab independence, succeeded in freeing Arab lands and eventually secured international recognition of the emergent independent states by the League of Nations in 1919.

Readers will find this book interesting and informative.

— Col R Rama Rao AVSM (Retd)

Rethinking Middle East Politics : State Formation and Development. By Simon Bromley, *Cambridge, Polity, 1994, p. 203, £ 11.95, ISBN 0-7456-0908-2*

In an erudite and analytical work Simon Bromley, a lecturer in International Political Economy in the University of Leeds (England) has discarded the current modernisation and dependencies theories. His thesis is based on historical development of surplus appropriation to explain social & political advance in the Middle East. His attention is focussed on the process of state formation and capitalist development in a number of countries in the region. Following a logical pattern from the general to the particular, he starts with general theorisation of the region and thereafter makes a comparative study of development models of Turkey, Egypt, Iraq, Saudi Arabia and Iran. It is certainly a wide coverage but some how Syria has been omitted. However, the author does suggest that the approach recommended by him "can be extended to cover more societies in the Middle East to detail the transformation more fully ..... more detailed accounts of more states are called for". His forecast for the region is rather bleak; he avers that in spite of oil and other rents the region is likely to face economic crisis and political instability. It is doubtful if the U.S. influence in the region would be able to ward off this danger.

It is a thought provoking and interesting book which is strongly recommended to students of West Asian Region.

-- Air Mshl M L Sethi PVSM, AVSM (Retd)

Men of the Luftwaffe. By Samuel W Mitcham, *Jr. Novato, Presidio Press, 1988, p 356, $ 18.95, ISBN 0-89141-308-1*

Mr Samuel W. Mitcham Jr. has a number of books to his credit and this is another book which gives the details of the senior commanders responsible for man-

aging the largely secret German Air force. He starts with Goering in 1933 and ends with Greim in 1944.

The author has achieved his main purpose which is to look at the men behind the airplanes and to examine the fundamental causes of the Luftwaffe demise. He has ably analysed the characters of these officers who were intelligent, energetic, lazy, brave, coward realistic and romantic.

In the appendices, the author has also briefly described the life history of other Luftwaffe personalities as also the details of the principal German aircraft between 1935 and 1946.

A well researched book which is easily readable and would be of interest to the people connected with the air force.

— Captain R P Khanna AVSM
Indian Navy (Retd)

British Strategy in the Napoleonic War 1803-15. By Christopher D. Hall, *New York, Manchester, 1992, p. 239, £ 35.00, ISBN 0 7190 3606 2 hardback.*

This book, broadly speaking, is divided into two parts. The first part deals with strategic components albeit, manpower, finance, armaments, logistics, intelligence, politics, foreign policy and military objectives. In the second part, the author dwells upon as to how these ingredients were mixed by politicians during the wartime days.

The author demonstrates with detailed analysis and statistics as to how manpower was managed efficiently by raising Volunteer Services, bullion was taken from Spain and India, armaments manufactured to arm the friendly armies and navies of Russia, Prussia, Sweden, Netherlands and Austria to varying degrees against Napoleon. The concept of procuring supplies locally was adopted though it depended upon the contractors.

The British planners also frequently accepted a live-and-let-live strategy with their enemies in colonial regions till defeat of Napoleon. Britain had no place in a Napoleon-dominated-Europe and as such all decisive battles had to be fought there first.

An interesting book worth reading and possessing.

— Maj Gen J N Goel (Retd)

Seizing the Enigma : The Race to Break the German U-Boat Codes, 1939-1943. By David Kahn, *London, Souvenir, 1991, p. 337, £ 15.99, ISBN 0 285 63066 0.*

This book is a history of the invention of Enigma - an encoding and decoding machine, — its subsequent use by Germans and compromise by Allies. Enigma had three versions one each for Army, Air and Navy. The Poles had given one replica each of indegenously constructed army Enigma to France and England on 24 July 1939 and solved the air Enigma on 22 May 1940. The Britishers employed over a thousand people like mathematicians, Oxford dons, linguists, chess champions, clerks, crossword puzzle solvers and other specialists, even then the code breaking eluded them for two years till the capture of a functional naval Enigma machine together with a treasure trove of secret documents from a sunk German U-110 in mid Atlantic on 09 May 1941.

The book is written in the style of a best-selling spy-thriller : chilling, gripping enthralling and fascinating. It is based on hard facts duly researched and not on a writer's fertile imagination. It is worth reading and if possible, possessing.

— Maj Gen J N Goel (Retd)

'Against All Odds' : The British Army of 1939-40. By David Smurthwaite, Mark Nicholls and Linda Washington with Guest Authors, *London, National Army Museum, 1989, p. 95*

This glossy is largely about the Mother of the Modern British Army —— the British Expeditionary Force (BEF). It sketches out its attempts at trying to get its act together against all odds. The chief amongst which were the German Army Groups A, B, and C, 'blitzkreing' West-wards at breakneck pace, across the length and breadth of Western Europe of 1939-40 vintage. Most of the material reproduced in this book has a deep nostalgic cadence, truly after the heart of the old British bull-dog-breed.

The book is a befitting tribute to the Special Exhibition organised by the National Army Museum from 7 Oct 1989 to 10 Jun 1990 in Britain. Those who weren't there, read on and see for yourself what it was like.

— Lt Col A K Sharma

Cromwell's Army : A History of the English Soldier During the Civil Wars and the Commonwealth and the Protectorate. By Ch Firth, *London, Greenhill, 1992, p. 432, £ 17.50, ISBN 1-85367-120-7*

This book is a useful addition to the history of England with particular reference to the Cromwell's New Model Army which fought to overthrow King Charles I. This book - first published in 1902 - examines the role of infantry, cavalry and artillery and also how the army was administered.

— Lt Col Daljit Singh (Retd)

Burma Victory : Imphal, Kohima and the Chindit Issue, March 1944 to May 1945, By David Roony, *London, Arms and Armour, 1992, p. 208, £ 17.99, ISBN 1-85409-109-3*

The book claims to be an honest account of the war in Burma, March 1944 with accent on the role of the Chindits, is full of inaccuracies. On retreat from Burma (p.17), he talks of "2/3rd of the Limies on ponies—Stilwell's party arrived at Imphal?" (p. 32)-Tiddim road battles," a bath necessitated a descent of several thousand feet to River Manipur— occasionally fresh meat for lunch if a mule had been killed? and so on to — (p. 201) Indian army artillery — included a mountain regiment, specialising in anti aircraft and anti tank guns".

The main controversy regarding the usefulness of Wingate operation, is also doubtful— starting with the first Chindit operation 1943. It says "Calvert arrived at 17 Div HQ. at Kalewa dressed as a woman" — 17 Div had not advanced beyond Fort White! Knowing Mike Calvert I cannot imagine him doing so.

Finally the claim to Slim's plan to attack Meiktila, being based on a Wingate's memorandum of 13 March 1944 — is far fetched as we at Fourteenth Army H.Q never heard of it?

Indians do not feature as officers, it is not likely to be of interest, to our readers. The book is over priced.

— Maj General Partap Narain (Retd)

The War Puzzle, By John A Vasquez, *Cambridge, Cambridge University, 1993, p. 378, £ 14.95, ISBN 0-521-36674-7*

John A Vasques in "The War Puzzle" conceptualises War - right from definition, concepts, causes & types; to onset of wars and their escalations - their underlying causes and explanations.

The author has banked heavily on the available empirical data during the last quarter of a century rather than generating his own, has thus contributed tremendously in a much shorter research period (7 years) towards the "scientific knowledge" of war and peace. **"Peace can be learned",** without taking recourse to war.

The book has comprehensive bibliography and an exhaustive index with references; and should find its rightful place in libraries, Military Science Departments and with military students, thinkers and leaders alike.

— Air Cmde S K Bhardwaj (Retd)

Forearmed : A History of the Intelligence Corps. By Anthony Clayton, *London, Brassey's (UK), 1993, p. 288, £ 20.00, ISBN 0 08 037701 7*

Strategic and military intelligence has ever been a dominant factor for success in war, and an instrument of statecraft. In modern times, it has acquired new dimensions and capabilities. History of the systematisation of Intelligence is therefore, an important area of study.

FOREARMED is, essentially, a history of the Intelligence Corps of the British Army, commissioned as such on 19 July 1940 vide Army Order 112, drawing its antecedents from ad-hoc task-oriented organisations, like the Scoutmasters, The Guides Corps (early 19th century), the Indian Corps of Guides (1846), the "largest and most developed combat operational intelligence organisation"- Field Intelligence Department, which contributed to the British victory in the Second Boer War in 1899 with great credit, and, not the least, the ad-hoc Intelligence corps for the British Expeditionary Force mobilised in August 1914.

The value of the publication extends beyond the historical, to the educational, vis-a-vis the multiferous directions, skills and organisational systems integrated in Military intelligence.

— Maj Gen S K Talwar (Retd)

Dilemmas of Appeasement : British Deterrence and Defence, 1934-1937. By Gaines Post, *Jr., Ithaca, Cornell Univ, 1993, p. 363, $ 53.35, ISBN 0-8014-2748-7*

The book under review gives a comprehensive account of the dilemma that Britain faced during the years 1934-1937, shortly before the outbreak of the Second World War.

Britain's then Prime Minister, Neville Chamberlain, contrary to popular belief, foresaw the possible consequences of the rise of Hitler and Hitlerism, to the British and

Europe. Hence he (Chamberlain) wanted Britain to build up its military strength first to be able to stand up to possible threats from Hitler's Germany, before confronting Hitler. Chamberlain's actions were then considered as appeasement to a tyrannical and expansionist Germany.

This was far from being correct. Chamberlain wanted time to enable Britain to build up her military strength in order to be able to confront a powerful Germany. By his actions Chamberlain enabled his successor to confront and overcome Hitler, with American help.

— Colonel R Rama Rao AVSM (Retd)

Events and Trends : An Assembly of Essays and Book Reviews. By L.M. Bhatia, *New Delhi, Reliance, 1994, p. 82, Rs 100/-, ISBN 81-85972-61-3*

Bhatia's observations cover a wide sweep. From a close-up of the current turmoil the horizon widens to the still familiar fancies, failures and at times unpredictable behaviour of the British administrators on to glimpses of the decadent Mughal Emperors. An alumini of the Indian Administrative Service (IAS) Bhatia held high positions and had watched great personalities from close quarters.

— Lt Col Gautam Dharma (Retd)

Beyond the Wall : Germany's Road to Unification By Elizabath Pond *Washington D C, Brooking Institution, 1993, p. 367, $ 28.95, ISBN 0-8157-7154-1*

Those who have lived through the middle of the twentieth century have witnessed many historic events. Three of them stand out, the birth and then the death of Nazism and the destruction of Germany as a nation. It is the story of the rebirth of a united Germany, 45 years after the war, that Elizabeth Pond has written in her thoroughly researched book.

The book is written primarily for American readership since the part played by the United States was noteworthy in the dismantling of the Soviet Empire which led to, amongst other things, the reunification of Germany and the collapse of communism in Eastern Europe. Yet the book is equally important to anyone who is interested in the history of Europe since the Second World War.

She stresses the part played by Chancellor Kohl and the Foreign Minister Gensher in the myriad negotiations with East Germany, with the four victorious powers of the Second World War and with the European Union.

The negotiations carried out by Chancellor Kohl with the Soviet Union, particularly the huge loan that Germany made available to USSR and the offer to build houses in Russia for the returning Soviet troops, played a considerable part in getting the Soviet approval. She has praised two officers, Frank Elbe, presently the German Ambassador to India, and Robert Zoellick of the US State Department, for their part in the US-German talks.

Finally, Ms Pond suggests an agenda for the future, both for the United States and Germany and suggests an American - German bargain. As she states "Rewriting the American-German and Euro-Atlantic security bargain in the post-war era, then, should be the easiest part of Europe's task in the 1990's. We have a habit of cooperation; we are enriched by it; and the United States will profit in this decade from having an equal ally, finally, in the new Europe".

In view of the continuing Russo-German problems "Beyond the Wall" is perfectly timed and is highly recommended.

— Cdr S Varma SC IN (Retd)

The War at Sixteen : Autobiography Volume II (1916-1919), By Julian Green, *London. Marion Boyars, 1993, p. 207, £ 19.95, ISBN 0-7145-2969-9*

As old as the century, Julian Green went to WWI as an American ambulance driver. The sight of the dead and wounded made him a lifelong pacifist. With an inclination to become a monk and regarding all else sinful, even afraid to look at his own naked boyhood, he grew through a painful adolescence.

Translated from French the book is written with revealing sensitivity and honesty.

At 94-and still writing, one need wonder no long why he is so distinguished a writer.

— Col. Balwant Sandhu

Brother Number One : A Political Biography of Pol Pot, By David P. Chandler, *Colorado, Westview, 1992, p. 254, $ 24.95, ISBN 0-8133-0927-1*

Saloth Sar, who came to be widely known as Pol Pot, was the Secretary of the Communist Party of Kampuchea and later became the Prime Minister of the Country for a devastating three years. During his stewardship be unleashed a reign of terror almost destroying Cambodian Society and killing over a million of its population.

David P Chandler's biography is a well researched study of the life of a soft spoken self-effacing Khmer youth, who enjoyed a rather privileged upbringing, but rose to become a dreaded, ruthless destroyer.

A fascinatingly absorbing book.

-- Lt Gen P E Menon PVSM (Retd)

The Columbia History of Eastern Europe in the Twentieth Century. Edited By Joseph Held, *New York, Columbia Univ, 1992, p. 435, $ 16.50, ISBN 0-231-07696-7*

Joseph Held in this treatise compacted the history of East European Countries in a clean, concise and coherent manner; logically, lucidly and chronologically presented and provides narration of events at a time when eastern Europe was in a state of flux with the emergence of new social and political infrastructures. The book is a good guide in the surfacing of Soviet Eastern European Satellites from the "ashes" of USSR.

The historical maps of Europe 1914, 1923 and 1945 compiled with detailed chronology have enhanced the usefulness of the book manifold. It will be found useful by students of modern East European History.

— S K Bhardwaj
Air Cmde (Retd)

Pakistan Meets Indian Challenge : A Pakistani's Perspective of the 1965 War By Brig Gulzar Ahmed (Retd), *Dehradun, Natraj, 1991. (Ist Indian ed.) p 231, Rs 275/-*

The author a former Director of Military Operations and Military Intelligence of Pakistan Army would have had access to all the after action reports. With his own

knowledge he could have made an accurate assessment of the complete war in all theatres. Had he done so, we would have had a treatise like "The Other Side of the Hill by Capt Liddell Hart" which gave us some useful lessons. It is a pity that what could have been a useful book for the students of military history has been spoilt because of his clouded judgement due to his inborn hatred for India and Indians, fairly common amongst post independence Pakistani officers. This is evident in the preface, the introduction and the first chapter dealing with past history of Indo-Pak disagreements. Besides twisting historical facts at times foul language has been used.

Inspite of the negative points mentioned, the book can be useful in assessing our weaknesses, like the determined infantry attacks which in all cases failed to materialise inspite of massive artillery support or even at times wasteful use of armour in penny packets. Since we will have to meet the Pakistanis again, the book gives us a good insight into his mental make up - since the generation after 1947 have been tought nothing but hate - they will be the soldiers of the future - a mind full of hate, has little place for logical thought.

— Brig Y P Dev (Retd)

National Security Perspective Policy and Planning. By Col Ravi Nanda, AVSM, *New Delhi, Lancers Books, 1991, p. 273, Rs. 275/-, ISBN 81-7095-026-0*

The author is a senior retired army officer who has a number of books on similar subjects to his credit.

National security is much more important today than it ever was in the last two hundred years. Although we fought the British rulers to gain independence, the people and the country felt secure, under them, against external aggression and internal insecurity, which has had new dimensions added to it since the rise of terrorism.

The author says "If one goes through the record of performance of the Government from Nehru to Chandra Shekhar, it becomes evident that none of them developed a formal process for the evolution of National Strategy. It has been ad-hoc decision making or as a reaction to situations around India and within the country, displaying a lack of vision on National Security."

A well researched book which will be of help to civil and defence planners to learn from the mistakes of the past and help to bring about peace in the region.

— Brig Y P Dev (Retd)

Law Relating to the Army in India. By Colonel Nilendra Kumar and Rekha Chaturvedi, *Bombay, Tripathi, 1992, p. 370, Rs. 300/-, ISBN 81-7118-051-5.*

Recently Army Act has been subjected to scrutiny by various High Courts and also the Supreme Court. This book has included various rulings given out by the august civil courts both on military law and the service conditions.

All the important judgements have been classified under main headings and listed subject-wise. Part I covers rulings on the military law while Part II reproduces Army Act 1950 and Army Rule 1954 (with notes). Recent amendment to Army Act vide The Army (Amendment) Act 1992 has also been incorporated.

— Lt Col Daljit Singh MSc (Retd)

India's Strategic Future : Regional State or Global Power? Edited By Ross Babbage and Sandy Gordon, *Delhi; Oxford Univ, 1992, p. 184, Rs. 250/-, ISBN 019 563169 2*

This is a short but comprehensive study of India's strategic and defence problems as it appeared to some scholars, Indian, Australian and Indonesian, in the late 1980s and early 90s. The global situation has no doubt changed somewhat at the turn of the 80s and during early 90's, as a consequence of the virtual break up of the Soviet Union for which the foundation was laid by Comrade Gorbachev. Following this, Russia lost some of its strength as a global power that could challenge the United States. As a result the powerful support that India could expect and was getting from Russia cannot but be diluted as of now, at least in some measure.

The authors of the different chapters of this book suggest that India is emerging as a regional power of some consequence and as such its stature and power potential is bound to grow.

True enough, but Indian leaders have to strive hard to ensure that India's trade, especially its export of manufactured goods and technological skills, grows steadily, and with that its foreign exchange earnings.

This is a book worth careful study by students of current affairs.

— Col R Rama Rao AVSM (Retd)

Bureaucracy : IAS Unmasked. By M K Kaw, *Delhi, Konark, 1993, p. 154, Rs. 150/-, ISBN 81-220-0327-3*

Mr Kaw's delightful style is intelligent camouflage for the pithy nature of comment. It's the flavour that keeps the content digestible. A prasaic style would have been self defeating in that such public airing of views would have invited the opprobrium of his ilk-the subject of his critical appraisal and the object of his wit.

Being an insider's account and an old timer's observations the caricatures conjured are plausible. He is indeed the Proudfoot in civvies. His characterisation of the 'civil servant' in being neither 'civil' nor a 'servant' is our answer to Hawthorne's Sir Appleby and Fowld's Bernard of the 'Yes, Minister' fame.

— Captain Ali Ahmed Zaki

Cantonments in India : Evolution and Growth, By T. Jacob, *New Delhi, Reliance, 1994, p. 162, Rs. 195/-, ISBN 81-85972-60-5*

This is a well documented study of cantonments in India by a person who has been a key official in the Ministry of Defence dealing with military lands and cantonments. The author has covered all aspects from the concept to growth and development of cantonments in India.

The desirability of keeping these cantonments which now number 62 as separate entities has been gone into great detail and every time their necessity has been acknowledged. These could have been examined in some greater detail. It has been admitted by all that these cantonments are islands of fresh air and greenery, of peace and tranquility in a sea of shanty dwellings, squalor and filth. There is strict control to ensure that these do not degenerate. Appendices which cover about half the book provide much useful background information. A welcome study.

— Lt Col Gautam Sharma (Retd)

The Indian Ocean and its Islands : Strategic, Scientific and Historical Perspectives. Edited By Satish Chandra, B. Arunchalam and V. Surya-Narayan, *New Delhi, Sage 1993, p. 221, ISBN 81-7036 -313-6*

The Indian Ocean has played a vital role in the history of human civilisations. In recent centuries, it has been the focus of colonial and imperialist activities and subsequently has served as a major arena for the Cold War.

Much has been written about the geo-political, geo-strategic and economic factors, with regard to the Indian Ocean and the islands it contains. We have had a Himalayan blunder. We must not have a repeat of this, by neglecting to safeguard our interests in the seas.

The Society for Indian Ocean Studies, has done a commendable job in promoting awareness of the importance of this ocean. In this volume, they have included fourteen articles, written/presented by experts. These essays have covered four themes, strategic, legal, exploitation of resources and maritime traditions.

— Maj Gen Ram Nath, SM

Kashmir : Towards Insurgency, By Balraj Puri, *New Delhi, Longman, 1993, p. 103, Rs 35.00, ISBN 0 86311 384 2*

Jammu and Kashmir is constantly in the news. There is a fairly active insurgency and terrorist activity in the Kashmir valley and the Doda District. It causes concern to every right thinking citizen in India. Unfortunately very few people are aware of the complexity of the problem vitiated beyond limits by corruption and political skullduggery for decades - the peak was reached in 1984 when defections were engineered in Farooq Abdullah's party to topple him and Gul Shah was installed as the Chief Minister.

Here is a pamphlet in which the author gives a well connected and very readable account of the political acrobatics related to J and K. He faults almost every one; like a good critic he has 'left no turn unstoned'. Whether one agrees with his judgement or not is immaterial. The value of the pamphlet is that one gets a fairly full picture of the political developments in the state related to democracy and autonomy culminating in a situation in which the Kashmir valley became a fertile ground for insurgency and terrorism. It is a timely contribution because insurgencies have an average life cycle of twenty years and we are only in the fifth.

His well argued point for regional autonomy for the ethnic regions of Ladakh and Jammu is worthy of serious attention and action. Nehru, Sheikh Abdullah and Shyama Prasad Mukherji had agreed to it; it was an informal part of Indira Gandhi - Sheikh Abdullah accord of 1974; and in 1986 Farooq Abdullah even set up a commission of eminent experts to workout the details. But political expediency always overcame the wisdom of this measure. The spirit of autonomy provided to J and K under article 370 of the Indian constitution should be fully and unequivocally extended to Ladakh and Jammu in their relations to the State government of J and K. It is a measure of political psychology as also developmental acceleration which will do good to all the regions of the State.

The focus of the pamphlet is on the internal political happenings in the State.

Consequently the author touches on the Pakistan role but briefly. Unfortunately the problem will persist unless India appreciates root cause of the problem. It has to help Pakistan liberate itself from the psychological bind into which it has got shackled. Kashmir problem is a mere symptom of the great injustice and tragedy that was afflicted on the Muslim community of India in 1947. It has been fragmented into three nation states. The largest segment of Muslims is still in India - 120 millions; the next large segment is in Bangladesh which has become one of the poorest countries in the world; and the smallest segment is in Pakistan which has been directly or indirectly ruled by the military since 1958. The attitude of the Indian elite that partition was a self inflicted injury by the Muslim community does not reflect statesmanship. India, particularly the enlightened Indian citizens, have to work actively for India - Pakistan reconciliation to undo this injury. When that happens Kashmir will become a bridge rather than a battle ground - between India and Pakistan. More than any other segment it is the Kashmiris who have to understand this fundamental truth because they are paying a heavy price for the tragedy.

Despite errors like on page 18 Mohamad Ali Jinnah being referred to as the Prime Minister of Pakistan in 1955 (for Mohamad Ali) and on page 20 Aldair Stevenson (for Adlai Stevenson), the pamphlet is a very useful source for anyone who wishes to understand the Kashmir Problem.

— Lt General M L Chibber PVSM, PhD (Retd)

Nuclear Non-Proliferation and Global Order. By Harald Muller, David Fischer and Wolfgang Kotter, *New York, Oxford University Press, 1994, p. 258, ISBN 0-19-829155-8*

The three authors, two from Germany and one from the United Kingdom, all of them with several books on nuclear non-proliferation to their credit, have described in detail the past, the present, and the expected future of the nuclear non-proliferation regime at the global level. The information provided in the book forms an excellent background material to the NPT Review and Extension Conference due to be held in 1995.

The fundamental question raised by the authors is the "prospects for evolution in multilateral and global arms control and its contribution to the emerging structure of a new world order - or disorder." The answer given, after an in depth analysis is: "The structure of the new world order can be strengthened only by preventing further qualitative and quantitative expansion of nuclear weapon arsenals". The prospects in this regard are not too bright just now but may brighten after a few years due to convergence of interests of the nuclear haves and have nots.

N.B.S.

Additions to the USI Library for the Quarter-Ending September 1994

(The books reviewed in April-June 1994 issue have been added to the Library during this quarter but not shown in this list.)

Arms - Control

1.	Poole, JB and Guthrie R. (eds)	Verification Report 1992 : Year Book on Arms Control and Environmental Agreements	1992

Biography

2.	Mandela, Nelson	The Struggle of My Life	1990
3.	Naipaul, V S	A Way in the World	1994
4.	Patwant Singh	Of Dreams and Demons : An Indian Memoir	1994
5.	India, Publications Division	PV Narasimha Rao : Selected Speeches Vol I - 1991-92	1993
6.	Sudoplatov, Pavel	Special Tasks : The Memoirs of an Unwanted Witness : A Soviet Spymaster	1994
7.	Thomas, Mathew	Lt Gen PS Bhagat : A Biography	1994
8.	Venkataraman, R.	My Presidential Years	1994
9.	Kissinger, Henry	Diplomacy	1994

Espionage

10.	West, Nigel	The Faber Book of Espionage	1993

Fiction

11.	Keneally, Thomas	Schindler's List : A Novel	1993

Gulf War

12.	Friedman, Alan	Spiders Web : Bush, Saddam, Thatcher and Decade of Deceit	1993

		India -Defence	
13.	Dillon, G M	Defence Policy Making : A Comparative Analysis	1988
		India - History	
14.	Gordon, Stewart	The Cambridge New History of India : II-The Marathas 1600 - 1818	1993
		India - USA Relations	
15.	Jasjit Singh, Air Cmde (ed)	The Road Ahead : Indo-US Strategic Dialogue	1994
		International Relations	
16.	Deutsch, Karl W	The Analysis of International Relations, 3rd ed.	1989
		Islamic Culture	
17.	Goodwin, Jan	Price of Honour : Muslim Women Lift the Veil of Silence on the Islamic World	1994
		Kashmir	
18.	Nanda, KK (Lt. Gen)	Conquering Kashmir : A Pakistani Obsession	1994
19.	Verma, P S	Jammu & Kashmir at the Political Crossroads	1994
		Mizoram	
20.	Prasad, R N (ed)	Autonomy Movements in Mizoram	1994
		North East - India	
21.	Hazarika, Sanjoy	Strangers of the Mist : Tales of War and Peace From India's North East	1994
		Pakistan	
22.	Lyon, Peter, ed	Sir Morrice James (Lord Saint Brides): Pakistan Chronicle : With a Prologue and Concluding Chapter by Peter Lyon	1993
23.	Aiyer, Mani Shankar	Pakistan Papers	1994

		Philosophy	
24.	Radhakrishnan, S (Dr)	An Idealist View of Life. 1st Pub.1932 Reprint	1994
		Reference Books	
25.	Garrett, John	A Classical Dictionary of India	1994
26.	Spear, T G P	Delhi : Its Monuments & History	1994
27.	Baranwal, J (ed)	SPS Military Year-Book, 1993-94	1994
28.	-	Style Guide : The Best - Selling Guide to English Usage, Economist Publication,	1993
29.	Bhagat, Dubby	Peak Hour : A Hand Book of the Everest Flight	1994
		Religion	
30.	Radhakrishnan, S (Dr)	The Hindu View of Life, 1st Pub 1927 Reprint	1993
		Superpowers	
31.	Medvedev, Roy	China and the Super powers	1986
		USA - Missile Technology	
32.	Spinardi, Graham	From Polaris to Trident : The Development of US Fleet Ballistic Missile Technology	1994
		World War I	
33.	Bishop, James, ed-in-Chief	Red Beret 44 : Official Publication of the Airborne Forces. Pub. by Illustrated London News Group, London, SE 19 PF.	1994

BOOKS DONATED BY MEMBERS AND OTHERS

I Shri Sardari Lal Aggarwal, brother of Late Col Pyara Lal, former Director of the USI, has donated the following materials to the USI Library belonging to Late Col Pyara Lal :

(i) Papers/Manuscripts/Tapes dealing with 1971 Bangladesh Ops.

(ii) Books - 214

Some of the important books are listed below. The total list of books can be seen in the USI Library :

1. Bangladesh Documents - Vol II Ed. by Sheelendra Kumar Singh and others.
2. Pakistan's Western Border Lands Ed. by AT Embree
3. Strategies of Revolutionary Warfare Ed. by Jerry M Tinker.
4. The Untold Story by Lt Gen BM Kaul
5. The Uncertain Trumpet by Maxwell D Taylor
6. U.S. - Pak Relations 1947-1983, by Rashmi Jain
7. SUN TZU: The Art of War by Samuel B Grifith
8. Threat of War by Brig V Uberoy
9. Pakistan : The India Factor by Rajendra Sarin
10. Pakistan's Crisis in Leadership by FM Khan
11. Bangladesh : The Unfinished Revolution by Lawrence Lifshuuz
12. Bangladesh and India-Pak War : India Speaks at the UN - Publications Division, 1972.
13. The Shield and the Swords by Gen PS Bhagat.
14. Pakistan Army by Stephen P Cohen
15. The Far Flung Frontiers by Maj Gen OS Kalkat

II Col Gautam Sharma presented to the USI Library a total of 459 books. Some of the books have already been listed in the previous issues of the USI Journal. The list of remaining books is with the Librarian.

III Lt Gen SL Menezes, PVSM (Retd) has donated the following books to the USI Library:

1. Fourth Round : Indo-Pak War 1984 by Ravi Rikhey
2. Management Review and Digest No. 4, 1978

3. Industrial Relations No.1 Jan-Feb 1977
4. Industrial Relations - 1975
5. Industrial Relations - 1976
6. Geographical Journal, 1975
7. Geographical Journal 1977
8. Personnel Review Quarterly No. 1, 1976-IIPM
9. Centre for the Study of Developing Societies, Delhi- Disarmament, Development and a Just Order, 1978.

IV Maj Gen SC Sinha, PVSM, (Retd) Director, USI, has donated the following books to the USI Library :-

1. Sample Appreciations-II: Mountain by Maj Gen HW Kulkarni
2. Parachute Badges and Insignia of the World in colour by RJ Bragg and Roy Turnor
3. Wingate and Thimmaya : A Biographical Analysis by Maj RK Bhonsle
4. Strategic Partners: South Korea and the United States by Richard T Betrio
5. Disarmament : United Nations General Assembly and Disarmament, 1988.
6. Annual Plan 1989-90. Planning Commission.
7. Heritage : The History of the Rajput Regiment 1778-1949 by Mustasad Ahmad (2 copies)
8. Journal of the Australian War Memorial, April 1984, April & Oct 1985
9. With Pegasus in India : The story of 153 Gurkha Parachute Battalion by Eric Neild
10. The Fourth Round : Indo-Pak War 1984 by Ravi Rikhye.

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