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The Perils of Wishful Thinking

MAJOR GENERAL SATINDER SINGH

THE heading of this article might create the impression that it is something out of a boy's magazine dedicated to adventure. This is not so. Many of the most critical errors in strategy and of course in tactics have been compounded due to wishful thinking. Historical examples follow.

Before mentioning these examples it is of some value to define the term 'wishful thinking'. The Pocket Oxford Dictionary states that it is a 'belief founded on wishes rather than on facts'. Now history can be permitted to speak itself.

Hitler concluded a non-aggression pact with Russia in 1939 after his entry into Poland. Though he could have conquered Poland on his own he wanted to appease the USSR at this stage so that he could later deal with France and Britain on his Western flank. As an incentive he ceded some Polish territory to the Soviet Union as well. He then drove the British out of the Continent and defeated the French at the same time. Possibly he believed that the British would come to terms with him and he could therefore leave them alone. Failure to defeat Britain ultimately led to the establishment of the base from which Germany was finally vanquished, at least from the point of view of the Western Alliance. Now it was the turn of the USSR to face the Nazis. Stalin refused to believe this. He relied on the pact with the Germans already mentioned. His subordinates were told categorically to do nothing to provoke the Germans. When a buildup of Hitler's troops was reported opposite the frontiers Stalin stated that this action was that of individual German generals and not that of Hitler. This deduction was completely contrary to the German character, which is very disciplined and obedient. An action of the type that Stalin alluded to was and is obviously not in keeping with this trait. Such individual aggressive moves are more consistent with the Japanese character as actions in China indicated. In addition to this there was the expression of intent as given in Hitler's book—

'Mein Kampf. Here Hitler stated that Germany needed space for expansion. Since this was unavailable in the West he had said that Germany would expand into the East. He particularly mentioned the Ukraine for food and the oil in the areas of the Black Sea and the Caspian. These would have to be annexed. In addition he had strong racial prejudices. He considered the Jews and the Slavs as subhuman races. While all this had been written about the late 1920s and early 1930s these ambitions and prejudices should not have been ignored especially by the Soviets who believed that they truly understood history as opposed to the non-communist countries and peoples. At the same time the flow of German arms and equipment to the USSR agreed upon in the Pact was initially reduced to a trickle and then turned off from the beginning of 1941. This did arouse suspicions in the Soviet Establishment but was again ignored by Stalin. Strangely during 1940, defences on the old frontier between the USSR and the states to the West were dismantled and new ones further forward on the new one not built up. The latter was also partly due to the caution imposed by Stalin in not provoking the Germans. The Soviet generals had by this time been thoroughly cowed by the purges of the 1930 and would not take any action contrary to Stalin's wishes. Only one or two were prepared to defy these orders to remain in an unguarded stance. But in the main the Soviet forces continued to function as if they were at peace. Troops were in barracks and aircraft parked in orderly lines on forward airfields. It must be noted that the fact and even the date of the German attack was known to the top echelons of the Soviet government. Some 48 hours earlier in addition to sources located in Berlin some German soldiers had crossed over to Soviet lines to give information about the date and time of the attack. The Western Allies, at that time Britain by itself, was also passing on authentic information about a German assault on the USSR. Stalin considered that this was an attempt to get the Soviet Union involved in a war with Germany in order to bail out the British.

To recapitulate therefore German intentions to attack the USSR were clearly available; from— Hitler's writings; from diplomatic sources; from spies possibly located in the corridors of power in Berlin itself; from German deserters; and from the frontier guards.

All were disbelieved. Till the last moment. Belated instructions to take up defensive positions were sometimes received after the Germans had already invaded Soviet territory. The consequences were that Hitler was able to advance practically all the way till Moscow.

The USSR was saved the fate of France by space, General Winter and Hitler's own shifts in strategic aims.

Now let us take another example. This took place a little earlier than the previous one.

Wavell defeated the Italians in the Western Desert in 1940 and at that time, probably due to preconceived plans, turned aside from achieving full victory by diverting his forces to Eritrea and later to Greece. This diversion was of his battle hardened troops who had taken part in the Italian defeat. In their place he placed fresh formations who had yet no experience in the desert. He had been informed that the Germans were being moved to reinforce the Italians in Tripoli. Since at the time British had naval supremacy in the Mediterranean it seems unlikely that purely administrative reasons led to the discontinuance of the offensive. An advance to Tripoli would have sealed Axis hopes in North Africa and some two years of warfare in the desert would have been avoided. The move to Greece and Crete proved abortive in the short and long term. The former was a lost cause from the very beginning. Wavell persisted in acting in this region in spite of both military and political advice. It is possible that the Germans saw the Greek campaign as a means of diverting forces confronting the Italians in North Africa, though this has not been confirmed historically. If they did, they succeeded admirably. It could of course be said that there were other British reasons for the Greek Adventure. Wavell hinted of these to Guingand at the end of the War. These reasons have however never surfaced. The Italians in Eritrea were out on a limb and their elimination could have awaited the expulsion of the Germans and Italians from Libya. Be that as it may a grave strategic error was committed. Conventional military thought, may not agree with this view since the British elite have made Wavell into a hero. This is probably intentional in order to denigrate the brash but successful Montgomery.

Now let us look at the facts. Firstly Wavell had been informed about the arrival of the Germans before this actually took place. This refers to their reinforcing the Italians in North Africa. Secondly the Italians were not posing a grave threat to Egypt from Eritrea as is made out. Italian aircraft were trying to interrupt communications in the Red Sea. Once they had been cut off from main land Italy there would have been no problem in rounding them up.

Thirdly the Germans had proved themselves superior in mobile warfare in Western Europe. The impact on British leadership in the home country was such that they wished to avoid a confrontation in conditions where this superiority might lead to another British disaster. Fourthly the opportunity was to defeat the German forces before they fully acclimatised themselves to desert conditions. In this connection it must be noted that the German discernment of the way to fight in the desert was more comprehensive and rapid than the British in spite of the fact that the latter had been in the region for more than two years before the Germans entered the scene. It was therefore essential to tackle them before they found their feet. In any case baiting them with untrained troops in replacement of those diverted elsewhere was asking for trouble.

Could the reason for failure to appreciate the battle—worthiness of the Germans be based on wishful thinking? Did Wavell think that the effectiveness of Hitler's troops was exaggerated by commanders who had to justify their defeat at their hands in Europe? Some historians claim that it was Rommel on the German side that made all the difference. But the fact of the matter is that there were many generals as capable as Rommel in the German Army. It can be one factor but not the only one. It will be seen that Wavell was prone to discount the merit of the opponents of the British forces. He did the same in his estimate of the Japanese when he was given the ABDA Command in South East Asia. May be the superiority of the British soldier in his eyes clouded his judgement. The truth is that at the time the British armed forces were not prepared to fight a modern war. Doctrine and methods were still based on the war that had gone before this one. Here and there a glimmer of discernment existed but it was not universal. To think otherwise was heroic but not correct.

It is time now to look at events nearer home.

In 1947 Pakistan attempted to seize Kashmir by a coup de main. Tribals from the NWFP were collected and furbished at Rawalpindi under the eyes of the British at the Army HQ there. It is not possible to think that the latter were unaware about this. The British officers with the Gilgit Scouts in Kashmir territory openly declared their loyalty to the state of Pakistan. This too could not have happened without a nod from superior British officers at Rawalpindi. When the Indian side established itself in the Valley it would appear that they were sent on diversionary tasks to prevent them from

totally clearing it of Pakistani military and para-military forces. The then Pakistan Army Chief had recorded that 'India must not be permitted to establish herself West of the line Uri—Poonch Naushera'. Finding that the Indian steam roller had gained momentum which the Pakistan forces seemed unable to stop pressure was put on Mr Nehru to accept a Cease Fire and take the matter to the United Nations. This was successfully carried out by Mountbatten. The then Prime Minister accepted this without even consulting his senior Army officers. Once the case got to the United Nations, Britain and the USA made India appear the culprit for the breach of peace in the region.

But India was then in the Age of Innocence. Thinking that the UN would support it, points on the Cease Fire Line were given away in the expectation that the whole of J&K would in any case be adjudicated to it. As such a vast area north of Poonch among others was handed over to Pakistan in spite of actual Indian control of it. And there the situation rests with minor changes. Perfidious Albion had achieved its aim in perpetuating a constant source of irritation between the two new countries.

The Indian government very quickly realised the machinations of the British and the Americans in the UN. But it was now too late. The harm could not be undone. Mountbatten and other British advisers had sold the idea to the then PM that the continuation of operations in J & K would lead to war between the two countries. The fact of the matter is that at the time India was better prepared for war than it was in 1965. Large reserves existed to deter any Pakistani attempt to widen the scope of hostilities. This aspect was not even reviewed. The government decided, without any consultation with the army, to opt for the UN. What would have been won on the field of battle was lost in the conference halls of the world body.

The part played by 'wishful thinking' is too obvious to bear repetition.

India's War with China in 1962 falls into the same category. The eradication of the abysmal poverty in which India found itself after some 400 years of foreign rule was obviously priority No 1 for any government. It was a question of 'guns or butter', and the administration quite rightly chose the latter. But a peaceful situation along the frontiers proved illusory. The Chinese began to make tentative steps to correct the 'wrongs' done to them by virtue of

what they called the 'unequal treaties' imposed upon them by the European powers during the 19th Century. The aftermath of the Second World War and the victory of the Chinese communists in the Civil war immediately following this had established a strong central rule in China for the first time since the early Manchus. British diplomacy had accepted Chinese suzerainty in Sinkiang in order to keep the Russians out of that region. By so doing they created the impression that they would aid the Chinese in the event of a Russian incursion. While the latter were eager to expand into as much of Central Asia as they could without any serious confrontation with another power such as Britain, the British were pre-occupied with the defence of their Indian Empire from the Russians and wished to keep them as far away as they could from it. Logically the acceptance of Chinese suzerainty over Sinkiang meant that they had to do the same with Tibet. Here however suzerainty over Inner Tibet (Tibet proper) was to be purely ceremonial or let it be said, nominal, while the Chinese could control Outer Tibet (the Eastern fringes of the Tibetan Plateau) which had no direct relationship geographically with India. Inner Tibet was therefore to be independent of China and guided in its foreign relations with other countries by the British. The latter also demarcated the Southern rim of the Tibetan Plateau as the boundary between their dominions and those of the Tibetans. At the same time they claimed possession of the Aksai Chin, an area lying to the East of the Karakorum Range. As far as can be determined the Chinese did not protest about any of these actions, though at the same time they did not ratify the boundary put forward by the British. The Aksai Chin it must be noted lies astride the routes into Western Tibet from Sinkiang. By this means the British established a 'buffer' state between India and China. Having learnt that an over-extension beyond the then India's geographical frontiers could lead to disaster as in Afghanistan, they preferred to avoid military occupation but at the same time established pliant governments in such 'buffer' states. Military force would be, and was, stationed in India to carry out punitive incursions should these governments not conform with British policy. This is a rather simplistic explanation of the position taken over by the Indian government at the time of partition in the case of Tibet. The picture that therefore emerges is of a China determined to restore its position in the whole of the territories that it claims; and of an India which after centuries of foreign rule and the traumatic experience of partition desires to lose as little influence and territory as possible. In a sense both aims are irreconcilable. The Chinese in

addition claimed areas under Indian occupation and which form part of Arunachal Pradesh and Assam. They also desired to acquire or re-acquire the Aksai Chin. This further complicates matters. After some cursory and superficial discussions it seems that the Chinese decided that through sheer force of arms they could occupy Tibet, where no Indian challenge was possible, and thus to terminate any special rights that India might have inherited from the British. Since their suzerainty over the region had been accepted there was nothing that India could do about this apart from the physical difficulty of fighting a war there. To avoid the problems of maintaining their troops in Western Tibet from Lhasa in the East the Chinese took over the Aksai Chin which was, and is, Indian territory by default. India was at the time unable to garrison it as it lay out of reach of communications in J & K.

The flight of the Dalai Lama and the giving of sanctuary to him in India further exacerbated relations between the two countries. China was at the time at the height of its power. It had successfully prevented the USA from establishing UN forces on the Yalu River on its frontier with North Korea. The Soviets were friendly and there was no threat from the North and the West. Vietnam, in the absence of other friends was well disposed to it, as it needed assistance in its freedom struggle against the French and later the USA. The USA was not prepared to involve itself against the 'human waves' of the Chinese with conventional weapons. India on the other hand had no strong friends. Both Britain and the USA were too eager to prop up Pakistan against it. The Chinese were able therefore to operate against India in Tibet and those areas where Indian power could not make itself felt with impunity. And Indian power, as represented by its armed forces, was at its lowest level due to the policy of 'butter' before 'guns'. Some rearmament was taking place to cater for the most immediate threat which came from Pakistan who was at the time being equipped with the most modern weaponry by the USA. Since it had opted to form part of the regional pacts established by the Americans. Incidentally this was an opportunistic move really directed against India. Regional considerations in support of US policy were secondary and this continues to be the case in the present day. Rearmament and expansion on the Indian side was affected by financial constraints and the fact that all equipment had to be bought at high prices from Western sources, as opposed to the 'gifts' obtained by Pakistan from the USA. To add to this was the fact that the then PM was not desirous of consi-

dering a threat from China at all. Planning to cater for this was severely circumscribed by directions from this level. As a result the Chinese obtained a headstart of some 5 to 6 years before any preparations to meet any incursion from them was commenced. It was only in the late 1950s that measures were taken to improve communications to the vital areas of the Tibetan frontier. In the case of the Aksai Chin it was already too late as the Chinese were in occupation of it. It must be noted that the physical difficulties of the terrain and the climate made preparations against the Chinese a slow process. As deployment took place in the forward areas clashes began to occur. Orders restricting the opening of fire which also applied all along the Cease Fire Line in J & K with Pakistan had a detrimental effect on morale and the effectiveness of the troops. The reason for these restrictions was to avoid provocations which might result in strong retaliation by the opposing side. This passive attitude could only encourage aggressors. The fact that the government did not want war is fairly clear. Mr Nehru though vociferous in national and international forums on the issues of the world had an aversion to war. His reading of Asian history brought him to the conclusion that China and India had never clashed and would not do so in the future. It was this that led to his orders to disregard the Chinese as a threat to Indian security. Through hindsight it is possible to see that the highlands of Tibet posed a major obstacle to massive incursions from China into India. Thus ingress would be limited to border skirmishes. In a sense this is what happened in 1962. The prudent Chinese would not overreach themselves and stopped when they had arrived at the limit of feasible administrative support to their troops. History has shown that by and large the Chinese have rarely stepped outside the boundaries that they have laid down for themselves.

It is now necessary to go back to the period prior to the War with China. Sensible military opinion had recommended that the forward moves of defending troops should be related to the extension of road links from bases in the plains. And this is how the deployment was in the then NEFA. This means that the deployment was short of the frontier as India saw it though light detachments were positioned and they patrolled to it. In fact it was one of the latter in a periodical patrol that queried the location of the border in the Thag La area since it seemed that the crest line of the Himalayas was further North of the usual place up to which the patrols went. The same applied to other rivers which rise in Tibet

and then piercing the Himalayan barrier pass through India to the sea. Clarifications requested from the highest authority seemed to have been misconstrued that the Chinese were in possession of Indian territory. Inspired leaks led to an outcry in Parliament to which the PM Mr Nehru reacted by telling reporters that he had ordered the army 'to throw the Chinese out'. This forewarned the latter and they made preparations accordingly. The baiting in Parliament and elsewhere by irresponsible jingoists made the government throw caution to the winds. Sober military judgement was brushed aside and the more ambitious generals commenced to put the chance statement of an irritated Nehru into effect. It was once again the time for 'wishful thinking'. Chinese troops in strength were garrisoned some 40 kms away from the site of the area while Indian forces were some treble that distance away and there was a footpath for most of the route to it. Simple mathematics would have shown that it was impossible for the Indian side to occupy it before the Chinese could do this. The criterion hitherto applied of basing troops in defences at the end of three ton roads was discarded. One of the generals involved had been an observer in the Korean War and should have known better. It seems however that he was more influenced by his experiences in the Kashmir Operations in 1947 and 1948, without realising that the two situations were entirely different. In 1962 the Indian army was facing a battle-hardened force in place of, largely, irregulars in 1947-48. A hastily unplanned operation which was administratively over-stretched had little hope of success. The initial build up in the forward area was easily disrupted by the Chinese and the Indians did not recover their balance right down to the Cease Fire. Though the Chinese had claimed the whole of the NEFA they evacuated it totally. This could not be only a political decision but was based on the fact that they could not maintain their troops in it. This would have led in the end to certain defeat which would have nullified any impact they made on world opinion by their early successes.

Both politically and militarily it was a major defeat. The direct consequence of this was the Pakistani aggression in 1965.

The examples quoted demonstrate it is hoped the perils of 'wishful thinking'. While boldness and risk taking are ingredients in political and military strategy they must be utilised after an objective analysis of the problem to be overcome. Subjectivity or wishful thinking can only lead to failure. Leadership is based on a strong ego. This can nullify objectivity. It can lead to wishful thinking.

A great leader will listen to contrary opinions before making up his mind. In this way he is more objective than the strong leader. Then there is the syndicate solution of the Staff College. It may not be brilliant but it will be practical. And less likely to lead to disaster. That is why a democracy is stronger than a dictatorship since a solution emerges from many minds. Even in a hierarchical society as the military is, higher levels of command depend on discussion, if they are to succeed rather than on an arbitrary leadership decision. Objectivity must eclipse 'wishful thinking'.

Counter-Insurgency and Counter-Terrorism: Old Perceptions But New Challenges

MAJ GEN YASHWANT DEVA

INTRODUCTION

MUCH has been written about counter-insurgency and counter-terrorist operations. Nevertheless, search for fresh ideas continues. Because of recent upsurge in insurgency and terrorist activities, both in quantum and sophistication, the issue is alive again.

Throughout our history, we have fought wars that were unconventional, if not insurgency and counter-insurgency operations of the classical type. Incidents of guerilla actions, when defeated armies took to the jungle and adopted hit and run tactics are described in books pertaining to history of the Vedic period. The Muslim period is replete with examples of insurgency. Concentrating for a swiftly executed attack; dispersing after gaining objective and when confronted by a superior enemy; operating from hide-outs were battle tactics adopted by Marathas and, later, by Pathans. Before Independence, some freedom fighters opted for violent struggle. Although their effort did not amount to much, there were spurts of spirited deeds of revolutionary kind, particularly those of Gaddar Party. After Independence, we were confronted with problem of insurgency in Nagaland, Manipur and Mizo Hills, that of infiltration in Jammu and Kashmir in 1965 and political violence in West Bengal in 1970. We are now facing terrorism at a large scale in Punjab. It is paradoxical that inspite of rich experience, our ideas about counter-insurgency and counter-terrorism are borrowed from the West, and we have failed to evolve a doctrine which suits Indian conditions. In this paper, focus is on factors which breed insurgency and terrorism; strength and vulnerability of our political system in preventing crea-

tion of objective conditions and the challenges faced by security forces in combating this menace.

CHARACTERISTICS AND CAUSATIVE FACTORS OF INSURGENCY

INSURGENCY AND REVOLUTION

It would not be correct for us to subscribe to the views of either Eastern or Western bloc countries with regard to organised violence and armed struggle. We need to formulate a cognitive world-view which is consistent with Indian ethos and unequivocally draw a clear distinction between revolution and insurgency. Attributes that set apart revolution from insurgency are: its legitimacy, mass base and intransigence of the system which the movement aims to change. Struggle in South Africa cannot be termed as insurgency, just as terrorist activities in Punjab cannot be termed as revolution. It is the absence of this clear and unambiguous distinction that has often made some of us espouse the wrong cause, and some others, guilty of not putting up a strong unified stand against forces of de-stabilisation.

Many epithets are used to describe those, who propagate sedition and have taken up arms against the state, e.g., hostile, militant, terrorist and extremist. This is sheer polemics. It is difficult to discern whether these terms are eulogistic or derogatory. Let there be no doubt that there is no difference, whatsoever, between a hostile, terrorist, militant or extremist, either with regard to his goals or means adopted to achieve these goals. They are enemies of the state and should be treated as such. They are all insurgents, and what is more important, those who have no qualms in killing fellow citizens are criminals. To treat them otherwise, is to demoralise and undermine loyalty of those who fight for the ideals that this country stands for.

THE CAUSE

The *raison d'être* of an insurgency movement is political or economic. Appeal of insurgency lies in a cause, which can be exploited to generate discontent and resentment in population. All legal governments are vulnerable on one count or the other. It is particularly true of an under developed country which practises an open society. This vulnerability stems from contradictions and conflicts present in society

which in our case are partly a legacy of the past and partly seeded by vested interests. It gets aggravated by acts of omission and commission of the government, viz, curtailment of civil liberties, failure to solve economic problems, high incidence of corruption and lack of appreciation of local sentiments. If we analyse past conflicts, as also problems in hand, we would notice that in Indian environment, these shortcomings tagged to the call for regional autonomy have given popularity to the appeal. The appeal is directed to religious and ethnic minorities as in the case of Jammu and Kashmir, Nagaland, Mizo Hills, Manipur and Punjab, or economically and socially backward communities, as in the case of Naxalites.

Invariably, a problem of insurgency arises because of perceived injustice and disenchantment of a section of the society, on one hand, and pursuance of indifferent policy by the government, on the other. It is aggravated, if the government remains passive and lets matters drift on account of political expediency. A weak-kneed policy, generated by its own compulsions, leads to weaker execution. Resultant failure is attributed to inevitability. In the absence of objective feed back, post-execution analysis is faulty and underlying causes of failure are conveniently ignored. The new policy, formulated as a follow-up, is also weak and so the vicious circle.

Sentiments play a major part in the make-up of a group and it is, therefore, not wise to play with these. In the past, there have been many occasions when we have, inadvertently or deliberately, ignored tribal, religious and linguistic sensitivities. We have been in a hurry to bring into the main stream tribals who, though backward in some ways, are proud of their cultural heritage. We have been tolerant of the nexus that exists between crime and politics. We have often failed to appreciate the minority psyche. We have been guilty of perpetuating a new social order in utter disregard to traditional values, and what is worse, we have made a mockery of religion for narrow political ends. When these acts snow-balled, we looked to British Malaya and Vietnam for guidance, borrowed terms like 'civic action,' 'fraternisation' and 'grouping of villages' and faithfully aped them, without understanding their relevance to a free democratic country, dealing with its own people.

INSURGENT ORGANISATION

An insurgent or terrorist requires an organisation for inspiration, support and sustenance. This organisation also acts as basic instru-

ment for achieving political ends. A movement can only endure if the organisation, which backs it, is strong and its members well knitted, disciplined and dedicated to the cause. Some organisations openly advocate sedition and, if declared illegal, work underground, e.g. MNF, NFG and Dal Khalsa; others project a facade of peaceful struggle and though legal, are equally subversive.

Overt or covert, an extremist organisation requires nourishment in order to hold its members together, keep up their morale and not to let their enthusiasm wane. So long as the goal appears achievable, the organisation thrives. More idealistic the make-up of its members, more egoistic are the needs. A larger majority of terrorists and insurgents remain at lower rungs of physiological and safety needs of 'Maslow's Need Hierarchy Model'. Loot and women are their main attraction. Those who qualify for higher gradation, i.e., social and esteem needs, obviously look for publicity and status of heroes.

Struggle for leadership of the Mafia, fear psychosis of the type generated by Anand Margis, bluff and bluster of Bhindranwale ilk and above all megalomania are the dominant characteristics, true of every extremist organisation. These very chinks in the armour could be its undoing. The organisation, therefore, can be wrecked by letting it die its natural death; by destroying it from within, rather than suppressing from without.

The younger generation, which is backbone of insurgent organisation, is attracted towards it, because life outside is unbearably monotonous. If conditions are so created and pressures so exerted, that life within too loses its charm and becomes equally dull, disintegration creeps in. There can be nothing more frustrating than 'lack of action'. Whoever heard of a self-proclaimed revolutionary twiddling his thumbs?

PUBLICITY

An insurgent or terrorist has strong propensity for publicity and would go any length to make his presence felt. It is for this reason that high-risk targets are increasingly sought for and hold an attraction. It has become a fashion to own responsibility after nefarious acts of large-scale killings and sabotage. Aim is to inspire awe and create panic. It also helps in placing law-enforcing authorities in disrepute.

If the terrorist is looking for headlines, the irresponsible newspaper is often willing to oblige. In the name of free press and investigative journalism, much harm is done to law and order. Terrorists play to the gallery, to impress the general public of their strength, to gain sympathy for their cause, to put government in the dock and to intimidate those who are loyal or belong to other communities, for the press, the more sensational the news, the better it sells. One often witnesses callousness and lack of concern. The nation pays heavy cost in terms of innocent lives and threat to its integrity. Criminals are projected as heroes and celebrities. Their pictures adorn front pages and glossy covers. 'Godses' get more publicity than 'Gandhis'. The hapless victims of terrorism are forgotten, and what is worse, those whom nation should revere for carrying out a difficult task by risking their lives, are often denigrated and ridiculed.

It is time that the media carries out an introspection. While there should be no curbs on objective reporting, the nation expects that there is balance in presentation of news particularly those which may incite communal passions. The press must be moderate in what it writes and refrain from catchy headlines.

PREVENTION AND PRE-EMPTION

STRENGTH AND VULNERABILITY OF POLITICAL SYSTEM IN PREVENTING INSURGENCY

Because of presence of ethnic' religious and linguistic minorities and adherence to a democratic system, India's vulnerability to insurgency and terrorism is, but natural. These realities are, both, an asset and a liability. Whereas divisive forces of religious fundamentalism, linguistic chauvanism and ethnic parochialism have plagued the nation, unity in diversity is a laudable concept for people to rally round. Efficacy of this counter-cause has been proved time and again. Democracy tolerates dissent. Though often abused, it is undoubtedly, a stable and lasting system. It enables people to air grievances and let-off steam. Single-religion-based polity and an autocratic system are no bulwark against insurgency and terrorism, as erroneously believed. Pakistan for instance is a theocratic state, with 95 per cent Muslim population. It has been under a dictatorial regime for most part of its existence and yet it is not free from militancy and terrorism. Islam, though a unifying faith, has not helped

successive governments of Pakistan, in resolving the nationality issue or contending with sectarian violence.

An economic or political system, whatever be its staying power, cannot endure unless it is periodically given a booster dose. It must change with times and not stagnate. It should be responsive to prevailing moods and changing aspirations of the people. Legal means for redress must always remain open. Whereas conciliation amongst disparate sections of society is desirable, appeasement and compromise on principles is not. There should exist a machinery which feels the pulse of the common man and, whenever it senses frustration due to lack of opportunity, resentment against official negligence and disappointment at snail's pace of progress, it should initiate corrective action. Otherwise, mood of cynicism, if allowed to prevail invariably mutates into hatred for all that is conventional and legal.

With hostile neighbours, who provide pastures for breeding terrorists and sanctuaries for their hiding, and, vulnerability of a sizeable population to propaganda on religious and ethnic considerations, threat to country's integrity is invariably in border areas. People of these areas need special handling. They bore brunt of wars, that we fought with our neighbours. They would be exposed again and if they shift their loyalty, it would be to our peril.

In the past, people of border areas suffered neglect, exploitation, and at times, even persecution in the hands of local bureaucrats and politicians. If we failed to integrate them into the national mainstream, it was because we had neither given them succour to bear privations, nor equal opportunities for development, as rest of the country. Some of the areas remained either under-administered or badly administered. Wherever bonafides of legal authority were suspect, extremism got a fillip.

Fortunately this policy has undergone a change for the better. There is a growing realisation of the past follies and a welcome determination to set things right. Nevertheless, there is much scope for taking political and economic measures which are progressive and vigorous.

The best way to defeat an insurgency, is to prevent it. Therefore, the foremost duty of the government to stamp out official indifference and callousness, provide opportunities, inspire a sense of participation in nation building activities, pursue noble sentiments

of national integration without reservation, resolve inter-state disputes with impartiality and show genuine concern for weaker sections of society and peoples of border areas

NEUTRALISATION OF EXTREMIST ORGANISATION

An organisation, which preaches violence, creates bad blood between communities and subverts the Constitution, should be treated with contempt, whatever be its legal pretensions. No unlawful organisation should be allowed to flourish. It should be the prime target even in preference to a hard-core fugitive from law carrying a price on his head. Its romantic and adventurous image should be shattered, lest it should hold attraction for the young to become Robin Hoods. Suggested means are:—

- o Infiltration of organisation with agents entrusted with task of causing fissures
- o Denial of an opportunity of armed struggle or acts of terrorism in favourable circumstances.
- o Political counter-propaganda
- o Direct action against leaders
- o Offers of amenity from a position of strength.
- o Complete black-out of publicity in media, which may help in image-building of the organisation or its leaders.

ISOLATION AND DETERRENCE

Insurgency is contagious. Proof of this statement is already available. Example of Naga rebels was followed by Mizos and Kukis. Example of communal fundamentalists resorting to large scale violence in Jammu and Kashmir, was followed by those in Punjab. If some areas have escaped insurgency and terrorism, it is because of timely political steps that prevented creation of objective conditions. With purposeful effort, the government can make insurgency and terrorism ineffectual and futile ventures. It should be abundantly clear to every citizen, every group and every community that there is a clear boundry between dissent and belligerency and that the system would be ever willing to concede genuine demands for larger good, but would give no ground to cavilling for narrow parochial interests.

The policy should aim at the following :—

- o Existing trouble spots are isolated.
- o Objective conditions propitious to insurgency are not allowed to develop elsewhere in the country.
- o No political advantage accrues to a terrorist or insurgent.
- o Interests of a community are not sacrificed under pressure from a militant section of another community.

COMBATING INSURGENCY AND TERRORISM

THE STRATEGY

The scope of this paper is limited to discussing the problem at the macro level. Therefore, tactics and methodology of conduct of counter-insurgency and anti-terrorist operations have not been covered.

Population is the objective, both, for insurgent and counter-insurgent. In the final analysis, exercise of political power depends on tacit or explicit agreement of the population or, at worst, on its submissiveness. It is to the people, therefore, that the government must address itself for combating insurgency and terrorism.

Insurgency, by definition, has a small base, otherwise it would qualify as a revolution. Although people are not with the insurgents, there is marked unwillingness to involve themselves on the side of forces of law and order. This is partly because of fear of reprisals, and partly because of mistrust of the government's ability to protect them.

A ruler's foremost duty is to provide protection to his subjects. If he abrogates this duty, he forfeits the right to rule. No authority, worth its name, can be silent spectator to atrocities and heinous crimes being committed. The worst stigma that an authority can be branded with is that of being called impotent. A 'wanted list' is not a counter to a 'hit list'.

The challenge from an insurgent or terrorist must be met fully, not through passive measures, but by seizing initiative. Strategy recommended for adoption is that of a stronger against the weaker, which means use of adequate force in a limited time and space and exploitation of shortcomings of the insurgents. Saturation of the affected area with security forces is not the answer. Past experience

shows that this does not produce results. Effort of security forces should not be diluted by distributing them in penny packets. It should be applied street by street, segment by segment, sector by sector and area by area.

Insurgents are free in their movement, avoid regular battle and their strength lies in mobility and surprise. Their aim is to split up operations into isolated battles of attrition dispersed in time and space. Terrorism, on the other hand, is a form of psychological warfare. A terrorist chooses his target depending upon its propaganda value and the effect it has in sapping will of the government machinery. It is not necessary for a hostile to fight unless it is to obtain arms and ammunition. His objective is political, his means primarily, psychological and his make-up no different from that of a common law-breaker.

Aggressive counter-insurgency and counter-terrorism operations pay. Security forces should not wait for hostiles or terrorists to strike, but seek them out, isolate them from their sympathisers and flush out sanctuaries. They have vast resources to carry out psychological warfare and these should be fully exploited. Some suggested measures are:—

- o Feeding of deliberate rumours that informers and double agents have infested the ranks of insurgents.
- o Establishment of effective communication channels, both formal and grape-vine, in order to reach to all types of audience, viz, general public, friendly elements, hostiles and their sympathisers.
- o Resort to varied techniques of propaganda with a view to exploiting weaknesses of hostiles and projecting an image of strength and fairness of the government to the people.
- o Deception with all its varied manifestations.
- o Offers of monetary incentives for providing intelligence.
- o Confering of honours and awards, not only on members of security forces who distinguish themselves in action, but also those citizens who put up resistance to anti-national elements.

QUANTUM OF FORCE

One of the most debatable issues about counter insurgency and other low-key conflicts is quantum of force which should be used by the

government. Too much force is counter productive. Besides, suppression is not an instrument that a democratic government can adopt. Too little force, on the other hand, is an open invitation to terrorism and insurgency elsewhere. There is a famous precept in law that it is certainty of punishment, not its severity, which acts as a deterrent. This precept is relevant to counter-insurgency operations too. An insurgent must know that he would not be spared and a law abiding citizen that he would not be victimised, whatever be his differences with the government.

Sometimes, there is apprehension in minds of the elected representatives of the state government that adoption of hardline against a militant section would erode their political base. This assessment may be resolutely contested by security forces, charged with the task of enforcement of law and order, who feel and rightly too, that a weak-kneed policy is an open encouragement to militancy. It is, therefore, for the Central government to lay down quantum and nature of force which should be used. Persecution and repressive policies are not advocated as these may fan local extremism and alienate general public, however unintended it may be. Punitive measures, too, do not act as deterrent. Nevertheless, it must be remembered that a balanced legal force, used at an opportune time, may well avert illegal blood shed at a latter date.

Conduct of security forces should always be above board. Even when applying force, discretion should be exercised between deterrent punishment and persecution, between ruthlessness and cruelty. Forces of law and order should inspire respect rather than awe. Looting villages, feasting on livestock, raping women, terrorising weaker sections of society and committing sacrilege of religious places are unpardonable offences. Such acts invite reaction from the public. These should never go unpunished. Nevertheless, a note of caution is sounded here. In order to demoralise security forces and to discredit them in the eyes of public, hostile propaganda often concocts incidents of commission of such acts, or, engineers situation wherein accusations of such nature would easily stick.

It is not obligatory that every insurgent or terrorist has to be apprehended and tried before a court of law, just as, it is not necessary for every enemy soldier to be taken as prisoner of war and brought before a war-crime-tribunal. Force must be met by force and there should be no inhibition in killing a fiend who has taken up arms against the state or murdered a fellow citizen in cold blood.

TIME FACTOR

For an insurgent, it is necessary to adopt a strategy of long term resistance with a view to building up armed strength while nibbling at and systematically destroying that of the counter insurgent. In the environmental conditions of the country, techniques of insurgency may not follow the classical pattern, that of containment, equilibrium and counter-offensive. Nevertheless, inspiration for war, of gradual escalation has come from Maoist theory. In China, final victory came after forty years of struggle. Although this parallel may not be truly relevant to the Indian conditions, it underscores the point that the government should not get involved in a prolonged war of attrition. Once insurgency erupts, it should be identified quickly and dealt with promptly. The current problems should not be allowed to linger on indefinitely, bearing in mind that time favours the insurgent. It also implies that there should be no lowering of guard in the run-down phase of insurgency.

COMMAND AND CONTROL

There cannot be two opinions that a triumvirate of administrator, soldier and policeman should control counter insurgency and counter-terrorist operations. However, often there are differences on type of top-level executive authority which exercises powers. There are contrary views; one advocating that military action is an aid to civil power, and, therefore primacy of political control should be maintained; other view is that moment a state government is unable to enforce law and order, its facade of legality is demolished in public eye and therefore it is prudent to place the state under an integrated administration responsible both for civil affairs and anti-insurgent operations. Whichever view one may subscribe to, underlying principles are that there should be a single direction at the top and that administration should be sympathetic, incorruptible and dedicated. Dual control breeds conflict, causing cleavage between policy makers and executors. This weakness is profitably exploited by insurgents and detractors of the government.

ORGANISATION

Primary responsibility for maintenance of law and order is that of police. Para-military forces, which in our case, include Border Security Force, Central Reserve Police, Assam Rifles and Armed Police are useful adjuncts. These are invaluable during period of unrest, wide spread insurgency and for sealing of borders. However, one

fails to understand the rationale of multiplicity of organisations. The havoc that mutual rivalries have created is universally known and yet there is no attempt to streamline and reduce number of these organisations. On the contrary new organisations have recently mushroomed.

In counter-insurgency operations, primacy of para-military and police forces should be recognised. Nevertheless, army has tangible assets of training, weaponry, communications and mobility, which are invaluable. Where police and para-military forces score over regular troops, are knowledge of local conditions and their identification with the population. These can be a liability too, because of their vulnerability to subversion, ease with which agents provocateurs can infiltrate the force, possibility of leakage of intelligence and communalising of the force. Under such circumstances, army should be employed from the very beginning and not when situation gets out of hand. A golden rule which has emerged from our experience in counter-insurgency operations in Eastern states and anti-infiltration operation in Jammu and Kashmir is that a mixed force drawing on assets of each others and placed under a unified command is sure to win. What should be the ratio of each is a matter of judgement, and would vary from situation to situation.

It is not advisable to organise security forces on the guerilla pattern, nor is it desirable that they adopt guerilla tactics. The dictum 'to set a thief, to catch a thief' often quoted, if not fallacious, is only part true. Guerilla tactics are successful to an extent when the government, due to political exigencies, is either unwilling or not in a position to commit all available effort and resources to struggle. These are not decisive by themselves and should not be preferred to regular combat and police action. This is not to suggest that commandos have no role to play in counter-insurgency and counter-terrorist operations. A major problem faced by security forces is to make contact with terrorists or hostiles, they being elusive. Gaining intelligence about their strength, movement, hide-outs and sympathisers is another. Detection must precede destruction and to that end, employment of commandos is most certainly advocated. A subsidiary wing of soldiers trained in special operations drawn from the Army, the para military forces and the police is, therefore, the right answer.

Based on the above considerations, a broad suggested structure is given below :—

- o Chief Executive and Coordinator, vested with powers of command and control. It is immaterial as to which cadre or service the incumbent belongs to.
- o Staff drawn from administrative services, defence services, police and para-military forces.
- o Intelligence and counter intelligence wing.
- o Public relations wing.
- o Infantry battalions.
- o Commando force.
- o Signal and electronic support units.
- o para-military units.
- o Local police

This organisation should be responsible to the political authority and given a clear mandate to combat insurgency and terrorism in a particular geographical area. Creation of a separate force is not advocated. Only infra-structure for command and control and specialised wings, e.g. for public relations and gathering of intelligence and counter intelligence, need to be created. Rest of the organisation should be drawn from existing military, para-military and police forces and based on the following principles:—

- o Unity of command.
- o Flexibility in organisation mix depending upon the nature of insurgency and mission assigned to the organisation.
- o Political direction and control at the top but no interference in conduct of operations
- o Maintenance of service integrity at unit level.
- o Selection of commanders and staff based on track record and without any subjectivity.

INTELLIGENCE AND COUNTER INTELLIGENCE

Competitive intelligence network must be avoided at all costs. A unified structure is essential to avoid duplication and infructuous effort. Adequate resources in men and material should be committed

and a sense of urgency inculcated for gathering of intelligence. General public should be involved and proper co-ordination maintained between the directional and operational levels.

One of the effective ways of conducting insurgency is to infiltrate into the security forces. Subverting loyalty through propaganda on religious and ethnic ground is another. Therefore, more stress should be laid on counter-intelligence aspects of organisation to obviate chances of leakage of intelligence, weed out elements sympathetic to insurgent cause and maintain surveillance on elements attempting to infiltrate in the ranks of the security forces.

PUBLIC RELATIONS

Lack of concern and apathy shown by the public is as bad as over reaction. The public remains indifferent to incidents of terrorism and the threat that these pose to the integrity of the country. The terrorists and security forces are both viewed as equal contestants and public solicitude for the latter is conspicuously absent. This is because of poor public relations.

Counter-insurgency and counter-terrorism are difficult and delicate operations. Security forces are always in an unenviable position. If they under-react they are criticised; if they over-react, they are criticised; and, if they do not act, they are criticised. This subjective criticism demoralises them. It is for the government to ensure that achievements of security forces and individual deeds of valour are given adequate coverage in the media. It is for the media not to 'nitpick' them for their actions.

Psychological warfare plays an important part in combating insurgency. Some of the measures required to be adopted are given below:—

- o Refutation of hostile propaganda.
- o Portrayal of credibility of own intentions and actions.
- o Identification of own weaknesses and educating people with a view to preventing their exploitation by insurgents and terrorists.
- o Preparing general public to accept privations and curbs on their rights as citizens.
- o Denying access to enemy propaganda directed at vulnerable sections of society.

- o Projecting image of strength of security forces and giving publicity to their achievements and deeds of valour.

CONCLUSION

Chanakya laid down four precepts of state policy उपायोस्सामोप्रदान भेद दण्डा : meaning, *Sam* (diplomacy), *Up-pradan* [bribery or monetary incentive], *Bhed* [creation of differences] and *Danda* [force]. There can be no better doctrine than what Chanakya laid down more than two thousand years ago. When confronted with problems of insurgency and terrorism, the government has wide choice of adoption of these methods. However, problem must be viewed from the point of view of national interest. Each situation would have a different solution.

No single approach has answers to all the problems. One should also make allowance for diversity of perspectives. Nevertheless, it should be explicitly clear that there is nothing called a military solution to the problem of insurgency and terrorism. The solution *per se* is political. One of the means, which could be adopted, is military i.e., *Danda*. What is required is, to display a remarkable '*tour de force*' of balance and judgement at the highest policy making level.

A Survey of Avionics and Future Trends in Air Warfare

MAJ GEN VK MADHOK

FROM purely observation duties in the first world war, Airforces have grown to include a variety of aircraft for different types of missions, heavy and light bombers, close support aircraft to help ground forces, interceptors and aircraft for reconnaissance, command and control purposes. Although aircraft would remain the primary tools of Air warfare, the combat helicopter and V/STOL (Vertical Short/Take Off and Landing) technologies, Precision Guided Munitions (PGMs), Remotely Piloted Vehicles (RPVs) and course satellites portend to constitute the total Air warfare environment of the coming decades. Further, to counter air threats, airforces have perforce to resort to sophisticated air as well ground defence measures such as the current NAGE (Nato Air Defence Ground Environment), AEGIS (Air Borne Early Warning Ground Environment Integration Segments), West Germany's GEADGE, UK's ADGE and so on which are worth taking note of.

Design technologies for the next decades, now taking place in the laboratories of USA and Europe (and probably USSR) in aircraft as well as weapons and materials, would open and usher in a whole new world of possibilities. In fact, because of the complexities involved in handling future aircraft, pilots of tomorrow might have no option but to hand over most of work to computers and confine themselves primarily to planning and tactical decision making! Cockpits of fighter aircraft are accordingly being designed for as much automation as possible. The innovatively built cockpit programmes of Northrop's F-20 Tiger Shark or McDonnell Douglas F-18, it is stated are already exhibiting as to what lies ahead!

It is however interesting as well as surprising to note, that current technologies in different countries seem to be arriving at the same point together. For example, if USA's search for a fighter aircraft for

the late 90's ends up with the same technologies as its European allies, then it would only be a confirmation, that man's creative drive and instinct have indeed reached the 'state of art' simultaneously which can of course be reassuring.

So far as selection of fighters for the 90's and even 21st Century is concerned, France's Rafale seems to be in the run as the Eurofighter for the next decade, although UK, France, Italy, West Germany and even Spain have still to come to a unanimous decision about its acceptability and are debating on its merits. Rafale has been designed by the same teams, that created the Mirage 2000 fighter. It will have air defence and attack variants. The former one is intended to deal with bombers, fighters, attack aircraft, helicopters, cruise missiles and RPVs: a formidable list indeed. The contenders to Rafale being Sweden's JAS-39 Gripen, and Britain's EAP (Experimental Air Programme). There is however lack of consensus between USA and Europe, probably as the latter wish to maintain their individuality. USA has yet to decide on its final design and is most likely gathering experience and widening its data base from projects like Grumman X-29, Mc-Donnell Douglas' F-15 and General Dynamics F-16 and so on. As USA has to cater for its global commitments the European fighters are primarily meant for NATO and that perhaps is the main reason for differences in approach as well as opinion.

HELICOPTER AND V/STOL TECHNOLOGIES

V/STOL is considered to be the technology of the future. This would help aircraft to take off from very small airfields, the size of a foot-ball field and which means much lesser effort towards their construction. European countries have today one such aircraft in the Harrier with NATO and US Marines. In the opposite camp Yak-36 is stated to be in service and was last seen on USSR aircraft carriers Kiev and Minsk. Some hardliners feel that small airfields are required only for a European environment and not countries with vast spaces. But they forget, that the growth in air-field denial weapon capability is precisely the cardinal reason to think in terms of V/STOL aircraft!

As regards close air support of the ground forces, this is an easy forecast to make, that it would be a combination of aircraft and helicopters (specially meant for this purpose). We may therefore

think in terms of air-support units or even brigades having aircraft as well as helicopters.

The combat helicopter has certainly added yet another dimension to Air warfare. From its pick and carry functions to its emergence as an anti-tank helicopter, it offers a highly mobile ATGM (Anti tank guided missile) weapon platform. Although in spite of its virtues, it cannot stand and fight alone and as such can only complement an anti-tank defence. A point to note is that helicopters are yet to be tested in a true air defence environment! Even with no air defence capability worth the name in Vietnam, USA lost nearly 4000 helicopters. Helicopters have opened up a new era of combat at heights of 200 meters and below. Worth mentioning are the MI-24 HIND, Soviet attack helicopter in use in Afghanistan and its HIND-D version with four rocket pads, two ATGM launchers, four barrel grating guns and can carry eight men: A formidable weapon system indeed, which is being neutralised with YAH-64 (USA), advance attack helicopter equipped with Hellfire ATGW system likely to replace the current AH-1 Cobra, standard gunship helicopter.

PGMs

Airborne PGM technology, usually referred to as air to ground or air to surface missiles is the next important development. AIM-7, Sparrow air to air radar guided missile is an example of an early PGM which was designed to overcome inaccuracies which take place due to ballistic dispersion of free fall bombs, aiming or windage errors while computing location and velocity of aircraft in relation to targets. By using laser and electro-optical guidance systems, PGM accuracy has greatly expanded destructiveness and therefore reduced the sorties per attack. As PGMs are launched well away from a target, there is less vulnerability to the weapon platforms equipped with PGMs from air defence weapons.

BOMBERS

The inter-continental bomber in the world arena seems to have lost its role to ICBMs (inter continental ballistic missiles). USA has had a good tradition of building a good bomber from B-17 in the 1930's to the current B-52. As regards inter-ceptor aircraft, while the Soviet inter-continental bomber threat is considered small by USA and they as such maintain a small force of air defence inter-ceptors, USSR, however, has a formidable strategic air defence

system with approximately 9000 SAMs (Surface to Air-Missiles) and a large interceptor force of 2600 aircraft.

CRUISE MISSILES

An important development is the long range cruise missiles. With its extremely accurate guidance system, it now offers an option to a stand off attack. It is a slow, 550 mph, highly accurate and virtually impossible to defend against because of its very small radar cross section and low altitude flight almost defy current air-defence radar. It can also be launched from a B-52. Its major disadvantage is of course its slow speed and inability to follow a mobile target. Efforts are afoot to develop ground, air and sea launch versions. And in B-52, the Americans have an economic weapon platform. Ultimately, cruise missiles could be designed to achieve supersonic speeds.

STEALTH TECHNOLOGIES

An important aspect of Air warfare now and in future would be the inclusion of stealth technologies. These include amongst others: the use of radar absorbing materials which scatter the radar waves, by contouring the aircraft and elimination of flat planes and sharp corners which reflect such waves. New designs to prevent the detection of jet engines by infra-red and sensors. Stealth technologies are more important for manned aircraft-particularly bombers than cruise missiles.

STRIKE RPVs

These are small unmanned aircraft which may weigh as little as between 15-160 lbs with an endurance from 2-80 hours, carrying payloads such as radar, jamming equipment or infra-red devices and capable of operation by 2-3 men. Their use as mini RPVs by Israel against Lebanon in their 1982 conflict really caught the imagination of Western as well as European countries. RPVs are now being designed for varied purposes such as for surveillance (TV cameras, IR images, sensors) or equipment for electronic counter-measures (radar, chaff or flares) or strictly for employment as weapon platforms (under-wing missiles with war heads). All this could ultimately lead to a strike RPV even within the next 5 years if not earlier. Here is a new all weather tool therefore, which would be in a position to locate enemy radar, airfields, headquarters and rather than just relay back information-would be able to perform an attack mission

by itself. Approximately twelve firms in UK and double that number in USA are today busy finalising prototypes for the early 90's. The next decade may therefore be an era of RPVs with the ultimate RPV being a sensor and weapon platform sharing or taking on a large number of functions from the air-forces.

FIGHTER TECHNOLOGIES

From the two essentials between speed and manoeuvrability, the latter is considered more important. The speed factor seems to have more or less stabilised at Mach-2 in high altitudes. It is considered of lesser importance as air combat missiles are capable of out-running aircraft. And what is now considered desirable is sudden bursts of acceleration, thus a clear shift is visible in favour of agility. The next generation of fighters would therefore have engines giving a thrust weight ratio of 1.10 instead of 0.78. Further, an effort is also being made to make the cockpits more comfortable for the pilots. One way may be to increase a pilot's "G" tolerance ie by trying to see if the pilot's feet can be further raised and by increasing the seat inclination during combat.

Alongwith radar, technology has made it possible to integrate displays and other systems. Electronics now allow conversion to digital systems for aircraft actuation, weapon guidance, fault detection and so on. The most important innovation may well be a safe low level bad weather day-night operation by way of projection of an IR picture of the outside world on a wide angle head-up display-combined with the use of night vision goggles. Some of this information could be displayed on the helmet mounted display visor alongwith the use of pilots' voice to control the radar select flight, fire control modes and active flares and chaff dispensing. New generation of fighters would probably be different; perhaps with a modified delta wing combined with foreplanes and canards. The rediscovery of the canard wing allows a reduction in drag, particularly from after-body of the aircraft, and enables an aircraft to react to new orders for manoeuvrability.

The new series of fighter aircraft in addition to Rafale such as Israel's Lavie, Sweden's JAS-39 Gripen will therefore have modified delta wings and foreplanes. To outclass Soviet designs, western designs may be smaller, less expensive and may have reduced radar and IR signatures, better cockpits/active controls, foreplanes, light weight and by-pass digitally controlled engines with thrust vecturing facilities.

CONCLUSION

With the availability of helicopter and aircraft mix, alongwith PGMs and RPVs, will there be a reduction in the deployment of troops? This is a question which may need deliberation. Whatever it may be, so far as the aircraft are concerned, with so many configuration changes to handle, a human being may have little option but to hand over a large number of functions to the computer and 'Fly by Wire'.

A New Approach to Military Leadership

Ethics and Character in Military Leadership

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GENERAL

The advanced armies of the world today are evolving their own theories of leadership and are fast dispensing with the civilian lead in the field. That the army needs a distinct philosophy of leadership is amply supported by the fact that there is qualitative difference in the civilian and military leadership on account of the differences in the goals to be achieved. For example, military success in battle cannot be measured by observable statistics whereas a civilian manager is able to measure success by profits, productivity, savings and so on. Similarly, while in the civilian life it is possible to 'manage' people in an organisation for achievement of laid down goals, in the army units and men must be 'led' to achieve unit and army goals.

In the army important decisions are taken by leaders involving lives of men which is not the case in the civil. Military leadership has, therefore to be based on markedly superior 'pillars' four of which have been identified as values, beliefs, character and ethics. These four are 'generic forces' that lead to good training maintenance, tactics and success in battle. Today it is exceedingly believed that if sound professional values, character and ways of thinking can be developed in the army's leaders, the rest will flow naturally.

In keeping with the aforesaid, leadership has been re defined as, "a process by which a soldier applies his beliefs, values, ethics, character, knowledge and skills to influence others to accomplish the mission".

ETHICS AND CHARACTER

Ethics flow from beliefs and values. The word *ethics* has been

derived from the Greek word 'ethos' meaning character. Ethics and character are therefore synonymous words with perceptual difference only. Conversely, in the modern concept of leadership it is pre-supposed that only men of character will make good military leaders. Since beliefs and values determine the quality of ethics and character, we will briefly state their relationship. Beliefs are opinions or assumptions about people, concepts or things that you hold to be true but cannot prove. The beliefs that become truth for a man are those which allow him the best use of his strength, and the best means of putting his virtues into action. A leader's beliefs will strengthen his determination and will to accomplish an assigned task. Values dictate the level of importance you place on people, concepts or things. An army needs unique values because it is a profession that demands sacrifices during trying circumstances. A soldier operates from a stand of trust to sustain confidence in himself, comrades, superiors and in the unit. Some of the values that readily come to mind are loyalty, responsibility and selfless service. Loyalty would include loyalty to men, unit, army and the country. Responsibilities will be such as successful completion of the assigned mission, training and administration of men, operational and combat effectiveness of units and well being of subordinates. Identifying personal and unit values, thus provides a frame work for developing a personal philosophy of leadership.

The quality of beliefs and values will determine the quality of ethics. Ethics are conceived differently by different people. There is nonetheless a unity on the basic approach which has been identified as follows :—

(a) All ethical views are concerned in some ways with distinctions between good and bad, right and wrong.

(b) All ethical views have been arrived at by thinking and by asking searching questions. They are not opinions or beliefs about what is good or right to which a person subscribes without giving them a second thought. Only when such opinions, codes, and standards are worked over by thought, subjected to searching analysis and criticism, do we have philosophic ethics.

(c) Ethics are thus well examined beliefs and values. These are general rules or guide lines that professionals follow to ensure that they do their duty in accordance with professional values, loyalty to the nation, and its ideals. In the army ethics help to ensure soldiers do not submit to selfish human tendencies and thereby abuse their power that the society and organisation has given them.

Clearly, the society has trusted professional soldiers with extraordinary powers which can be misused by unethical leaders. Ethics guide a professional in arms in the use of their powers for the overall good of the society.

Character. It is the sum total of a man's personality traits. It is well known that the three great possessions of a human being are health, wealth and character. In their order of importance, character is the most important. It is well said, "if wealth is lost, nothing is lost if health is lost something is lost and if character is lost, everything is lost". To further highlight the importance of character in nation building one has to remember the golden words of Martin Luther; he said, "The prosperity of a country depends, not on the abundance of its revenues, nor on the strength of its fortifications, nor on the beauty of its public buildings, but it consists in the number of its cultivated citizens, in its men of education, enlightenment and character". Men of character command the spontaneous homage of mankind. This impression is further re-inforced by quoting a small instance from French history. Louis XIV asked Colbert how it was that ruling so great and populous a country as France, he had been unable to conquer so small a country as Holland, the minister replied, "Because Sire, the greatness of a country does not depend upon the extent of its territory, but on the character of its people. It is because of the industry, the frugality and the energy of the Dutch that your Majesty has found them so difficult to overcome". It has been accepted beyond any margin of doubt that any effort on the part of military leaders, to arrive at a higher standard of character, than that reached, is inspiring and invigorating. The demand on leaders' character strength, it has been provided by research in the US Army's Centre for Leadership and Ethics at Fort Lavenworth, Kansas, increases significantly from level to level. The degree of moral strength and intellect required to be a successful corps or army commander in war is significantly greater than those at comparatively junior leaders of command. Conversely, only leaders of the highest character will get to the higher rungs of military command.

IMPEDIMENTS

Men possessed with great ethical values and high character are not soft pedalling their lives always. They are often faced with odds which they choose to confront rather than avoid. They adopt a cynical attitude towards life for, they intend to 'tear off the veil of human weaknesses'. They clearly perceive a position of comparative

material disadvantage but face it for higher goals. The type of disadvantage stance in which a materialist would find them is clearly illustrated by the position put forth by Thrasymachus, a character in Plato's 'Republic' in the following words: "You must consider foolish Socrates, that the just is always a loser in comparison with the unjust. First of all in private contracts. whenever the unjust is the partner of the just you will find that, when the partnership is dissolved, the unjust man has always more and the just less. Secondly, in their dealing with the state when there is an income tax, the just man will pay more and the unjust less on the same amount of income; and when there is money to be distributed the one gets nothing and the other much... (the) criminal is the happiest man, and the sufferers or those who refuse to do injustice are the most miserable".

In the national scenario today, there is the politician, the businessman, the smuggler, the cheat and so on. This section of the society competes in ostentatious living. An experienced leader of the armed forces brought up in a rigid atmosphere, used to hard earned money does not get disillusioned. People of strong character only can overcome such a pitfall. The consequent suffering to following the path of truth is best explained in Aristotle's words who said, "we are not enquiring merely in order to know what excellence is or virtue is, but in order to become 'good' for otherwise it would profit us nothing". It is only the 'good' that survives ultimately. It is for this reason that a military leader is not tempted to easy money. He considers himself the ultimate saviour of the country's honour. He perpetuates survival and truth where the politicians and businessman fail or perish. Needless to say that a successful military leader should be ready to suffer some hardships in following the righteous and ethical course.

APPLICATION OF ETHICS THEORIES TO MILITARY LEADERSHIP

It is not possible to state fully the co-relationship between the Ethos theories and military leadership. The relationship in two most commonly known theories is explained to some degree as follows:—

- (a) 'Philosophical holders' advocate that man must do what will benefit others if he is to obtain the greatest happiness for himself. It is indeed easy to understand that most wrong actions are detrimental to one's own happiness as well as to that of others. But it can hardly be maintained that this is true of all, especially where the life or health would be endangered by doing duty, unless we

postulate reward or punishment in future life. This theory therefore pre-supposes that a military leader should be of such high character as not to fall a prey to his human desire to save his own life at the cost of several men placed under his command.

(b) Under the purview of 'obligation theory', it can be stated that a military leader is obliged to take decisions which will involve him and his men being exposed to dangers of various degrees. The leader disregards those dangers in making his decisions on account of the need to produce intrinsically good results. He has also an obligation to save as many lives as possible. Evidently, there is often a conflict between two *prima facie* duties (obligation to carry out the assigned task and to avoid body harm to men). Faced with two obligations, there are no general laws which can help the leader; it is then left to his admittedly uncertain intuitive judgement. If the loss is very great, a military leader has to have strength of character to project what the orders given to him would involve if they are to be executed. The question is at once ethical and the leader's decisions will largely be dictated by the strength (or comparative weakness) of his character.

Clearly, there is a strong relationship between various ethos theories and military leadership. Clearly also society has trusted professional soldiers to use the power for the good of the society and not towards selfish ends. Ethics therefore, guide a professional in arms in the use of their power for the overall good of society, be it that lives of men under command and own life are sacrificed in doing so.

EXAMPLES FROM HISTORY

A case study of the "Battle of Little Round Top", fought on 02 July 1863 during the course of the American Civil War has revealed beyond doubt that Chamberlain's personal character was greatly instrumental in effecting a victory in certain situation of defeat. The 358 soldiers of the 20th Maine Regiment under command of Chamberlain were attacked by two Alabama regiments. After the first few attacks, ammunition was completely exhausted, and Chamberlain's battered survivors had only one option, to surrender. Chamberlain, himself greatly wounded, led a fierce bayonet charge with complete disregards to the tactical situation and made his enemy flee in great confusion. Victory came to Chamberlain and his men. It has been analysed that soldiers were tough and they were exceptionally well-led by a dedicated leader of 'unbending character', which resulted in victory in the Battle Round Top. [Military Review, Feb 1983; article by Lt Col BM Harris].

In his book, *To Lose a Battle*, Allastair Horne makes a strong case that values and narrow thought process of the French military leaders between the two world wars were the major cause for the catastrophic defeat of the French in 1940. Similarly, it is well established that the beliefs and thinking of the senior British leaders were the direct cause of their poor performance at the battle of Somme during First World War, where they lost 60,000 men.

In his book, "The Lightning Campaign, The Indo-Pakistan war 1971". Maj Gen DK Palit has clearly brought out that low character and values of the Pakistani soldiers were an important underlying factor of the Pakistani defeat, and comparatively superior ethics responsible for India's victory, in the Bangladesh war. Gen Palit records, "After months of brutality, looting and raping the Pakistani Army, from the highest commanders to the men in the ranks, had become partly dehumanised. Only those who saw at first hand the evidence of 'dark ages' behaviour of the once fine army can understand the debasing process that had shorn the Pakistan's professional mettle. In almost all cantonments and defensive strongholds, hundreds of young women had been kept in barracks and bunkers for mass sexual assault in many cases they were bayoneted or shot every few days as replacements were brought in. Mass slaughter of Bengalis was carried out until the very last days; burning and looting of inhabited areas had become standard procedure-all by order of the omnipotent Special Intelligence Service in Dacca. When these soldiers met on the field of battle a corps of gentlemen such as the Indian officers and Jawans proved themselves to be, a moral ascendancy was established which must surely have (had) a psychological effect on their quality".

It has been amply established that Shivaji's character greatly inspired his followers to build-up an empire for himself right under the nose of the great mughal army. He had extremely strong will power which he attributed to his mother Jija Bai. Early during his career, with a handful of men at his command he defied the powerful mughal rulers of Bijapur and Golconda and eliminated his immediate adversaries like Afzal Khan and Shiasta Khan. He built an independent stable state by 1659 and with resolute determination defended its independence right till his death in March 1680 from the onslaughts of the Mughals. Shivaji's success has been attributed largely to his personal character qualities.

PRESUMED CASE STUDIES

Case 1, A battalion commander during routine visit finds the

weapons and equipment of the men not in a state of good maintenance. The following points follow:—

- (a) Investigations reveal that the company commanders detailed to look into weapon cleaning do not ensure that the men perform preventive maintenance of weapons.
- (b) The major problem, the Commanding officer concludes is that his company commanders do not have appropriate professional beliefs and values about maintenance.
- (c) The commanding officer starts thinking about the beliefs and values of subordinates and how to strengthen them for proper management of weapons and equipment. He instructs the company commanders about the ills that can follow as a consequence of bad maintenance.
- (d) The company commanders' realisation about the importance of maintenance motivates them to carry out thorough maintenance. Over a period of a few months, the state of weapons and equipments (maintenance) improves. This is also seen from the AIA's and CEME's reports of the annual inspection, which grade the unit maintenance as 'good' as compared to 'satisfactory' in the previous year.

Case 2. Cadet A was a clever chap with a fair amount of intelligence. He was commissioned into artillery and got posted to a field regiment. The unit was located in a peace station near the officers' home town where he thoroughly enjoyed his stay at the cost of his work. In the first practice camp held at the artillery range, the officer managed to get a letter from home saying that his mother was sick. The commanding officer spared the officer to visit his home. By the time the unit finished the practice camp and got to barracks, the officer joined the unit. The Commanding Officer interviewed the officer and was happy to note (the officer's report) that his mother was now quite well. The unit was soon ordered to action in the wake of hostilities commencing with a neighbouring country. 2/Lt A reported sick for constant pain in his right hand. In view of the emergency the medical authorities ordered the officer to move with the unit with instructions that he will be treated by the unit RMO. After deployment the unit was affiliated to support an infantry brigade and 2/Lt A was detailed as an observation post officer with a forward company. The officer did not record his OP log correctly and when questioned by the battery Commander, he filled in the log book and did a face saving. One night he was woken up by his wireless operator and told that some movement was seen

in the minefield area. The OP officer alerted all his guns but withheld the orders 'fire'. After some time some noise was heard and 2/Lt A ordered 10 rounds gun fire on the DF(SOS). The Officer repeated the arty fire to be sure about slaughter of the enemy. Alas, during stand to the infantry patrols of the unit discovered a dog squad let loose by the enemy lying dead on the spot. The enemy launched a massive offensive next day at dusk and DFs were engaged. Since replenishment of ammunition had not fetched up, a few engagements only resulted in guns reporting "all ammunition exhausted". The infantry gave a bloody nose to the enemy but suffered heavy casualties. When the position became untenable, orders to withdraw were given. The withdrawing troops were unable to get arty support (despite replenishments of ammunition having arrived) due to wireless of the OP Officer not functioning. During withdrawal there were heavy casualties in the Company and the OP Officer got killed by an enemy shell. On the termination of battle, the following points were revealed.

- (a) While under training at an officer training institution, 2/Lt A had skipped nearly six weeks of training, but managed to avoid relegation.
- (b) The officer, while a cadet, had been reprimanded for a badly maintained rifle. The breakdown of wireless set too was attributed to poor maintenance.
- (c) During the final training camp marking culmination of tactical training at the officer training institution, the officer (as a cadet) had managed to be at the OP in a defence exercise. This duty was given to him as he told his platoon commander that he could not dig trenches due to pain in his right arm.
- (d) While manning the OP during pre commission training the individual did not maintain the OP log, but got it filled by another cadet who was friendly with him.
- (e) During an 'ambush' exercise as a cadet, the officer had emptied his whole magazine of the LMG drill cartridges out of nervousness even before the order 'fire' was given by the ambush commander.

This example requires no explanation to bring home how low values and character of the individual, which some how escaped detection during training, ultimately resulted in the destruction of the company which he was expected to support.

ACTUAL CASE STUDIES

Case 1. A graduate of the London University, Mr Young had just finished his studies when the war clouds had shrouded over the British Empire and the British nation wanted (the services of) young people to come forward to serve the nation. Mr Young one day saw an advertisement in the newspaper regarding emergency commissions in the army. The individual had other options too but he considered it his duty to serve the nation at a time when the integrity of the nation was involved. After selection, the individual was put through an emergency commission course and was commissioned into infantry. Captain Young was shortly posted to 1 Assam Regiment, a new raising in India. He soon won the sympathy and respect of all seniors and subordinates. His unit was assigned the task of defending Jassami, and Captain Young was selected to hold screen position and was placed in command of 'A' company. After some weeks of waiting the advancing Japanese contacted the screen position on 26 March 1944. Captain Young was determined to do his duty even at the peril of his life. The first attack on 'A' Coy position was delivered by a Japanese Regiment (brigade). The attack was repulsed and heavy casualties were inflicted on the Japanese. After licking his wounds the enemy pressed home several attacks, but under the resolute leadership of Captain Young the Company repulsed several attacks until after five days of stubborn fighting the Japanese occupied the better part of the defended locality. The line and radio communication with the battalion had been disrupted in the enemy shelling, and at last Captain Young ordered the left over survivors to withdraw. But he himself remained behind to man an LMG from a bunker to keep the enemy at bay and to enable his men to make a clean break. Captain Young died fighting at his post rather than withdraw or surrender to the enemy. Captain Young had thus done a unique service to his unit and his country. He was awarded Military Cross posthumously. The values of self sacrifice, courage, devotion to duty and loyalty to his men, which were dear to Captain Young clearly demonstrate his character superiority.

Case 2. 2/Lt Goswami of 13 Field Regiment was an OP Officer at Trishul in 1962 in the Sino-India war. The Chinese attacked the defended locality in waves with vastly overwhelming strength. After sustaining heavy losses the defenders were ordered to withdraw by Brigadier Raina (later COAS), but Goswami thought it to be his duty to provide fire support to withdrawing troops rather than himself withdraw. When the Chinese were mopping-up Goswami brought

heavy fire to bear on his defended locality which killed several Chinese, besides wounding Goswami himself. Goswami was presumed dead by the Chinese and they left him there to decay and decompose. Later at night he regained consciousness and crawled to the brigade headquarters undetected by the Chinese. For his bravery he was awarded MVC, the highest decoration given to any soldier in that war. Goswami's course mates narrate that while under training at the Indian Military Academy, at Dehradun, he was an extremely unassuming gentleman cadet who behaved well even when not observed. While on the Young Officers course at Deolali, in 1961, on a Sunday a mass punishment was given to young officers. Unsupervised, the officers concerned were directed to go on foot about 15 miles and touch the peak of a hill feature, Shiva Dongar. Goswami was one of those who did the punishment ordered, despite having the weakest constitution in the course. Though this single instance is not a total explanation of Goswami's character, it nevertheless is an indicator of the values he cherished.

Case 3. Major X was a decorated soldier with a good career profile. With eleven years service the officer was selected for Defence Services Staff College. He was doing quite well in studies but one day he could not get time to complete an assignment. Major X requested Major Y a friend to let him copy the solution to the exercise. Y agreed. The instructor's sharp eye readily discovered the cheating done. He reported the matter to the Commandant who ordered return of both the officers to their units. Two careers, otherwise budding, suddenly earned a blot. A keen officer who got posted to the training institution where Major X had done his pre-commission training went through the cadet days records of the officer. It was revealed that as a cadet, Major X had been severely punished at two different occasions for cheating in the examinations. Evidently, some traits of bad character if not corrected can lead a man into serious trouble later in life.

CONCLUSION

A leader's beliefs, values, ethics and character go to determine whether he is selflessly motivated to serve. These pillars determine the thought pattern and behaviour of the officers, JCOs; and NCOs, and men. The net product may well determine how successfully a body of troops will carry out its unit task, or how a larger body will carry out its unit task, or how a larger body will carry out its mission of defending the country's vital interests. Indeed, it is the character and intellectual capabilities of leaders at all levels that will determine the resulting quality of the Army.

An Indian Naval Infantry Brigade ?

MAJOR GAUTAM DAS, THE 11TH GORKHA RIFLES

INTRODUCTION

MAJOR Donovan Jackson (Invicta), writing in the Calcutta newspaper "The Statesman" in 1938, wrote: "India has no soldiers today specially enlisted as marines for service in her fighting ships, and whether future naval developments will require such a traditional force is doubtful". The Falklands war of 1982 saw a sudden upsurge of interest in maritime affairs and the security of our offshore islands, with a spate of articles in the national media. The pros and cons of raising a dedicated amphibious force have been debated, both in the press and in professional military journals.

The requirement of an amphibious force undoubtedly exists, the real question being, how much can we afford in the long-term and what can we afford now? Or will a stop-gap arrangement fit the bill? If so, what should such an arrangement consist of? This article attempts to answer some of these questions.

NAVAL INFANTRY OR MARINES: WHAT'S IN A NAME?

Names of regiments, corps and even formations are undoubtedly important, both for their members and also for the nation's public, who have to support them financially, and should also support them emotionally. Titles which are both descriptive, and, as far as possible, romantic, help in building esprit-de corps within the unit, regiment, corps or formation, and also evoke popular public support. Luckily, the choices for an amphibious organisation are not many. The word 'amphibious' in a title, while descriptive, is dull and dry, 'naval infantry brigade' or 'Marine infantry' would be accurate, but is also drab and prosaic, whilst 'Marines' sounds somehow glamorous, at least to the English-speaking world, thanks to the world-wide renown of the elite US Marines and the British Royal Commandos. Or, alternatively, we should jettison English designa-

tions altogether and choose an Indian one such as 'Samudra Sena' or possibly something even better.

Irrespective of the name of the corps or force, if a three-battalion (or three-group), force is decided upon, the three major components could be named 'Pala', 'Chola' and 'Chalukya' after three historically great maritime powers of the east, south and west coasts.

ARMY OR NAVY?

Whether the organisation is named 'Naval Infantry, or not, the fact will remain that they are meant to be used for the projection of power ashore, across an intervening body of water, which is a naval task in the broad sense. (Such projection of power would be either defensive, e.g., recapture of lost territory, or offensive). Naval tasks will be performed under naval command, and it is perhaps for this reason that all the major amphibious forces of the world, such as the US Marine Corps, the Soviet Naval Infantry and the British Royal Marines, are all part of their respective navies, though forming a distinctive element within it.

MAJOR PROBLEM AREA—COST

Cost is, undoubtedly, the major drawback or restraining factor for resource-poor developing country which perceives a need to raise an amphibious force. The total cost is likely to be great, with its major components being:—

- (a) Cost of specialized shipping.
- (b) Cost of additional fleet logistics shipping (i.e. fleet auxiliaries) necessitated.
- (c) Cost of assault equipment, both amphibious and heliborne.
- (d) Cost of overall logistics support, from shore-based mounting areas, through maintenance afloat, to support of the force ashore on the objective.

Specialized Shipping. These would include, in the long-term, a judicious combination of the following :—

- (a) At least one assault/commando/helicopter carrier with about 10-12 operating spots for medium helicopters, of approx. 14,000-

20,000 tonnes displacement. This carrier should be capable of embarking a naval infantry battalion.

(b) As many landing ships tank (LSTs) as are required to put the requisite No of AFVs ashore.

(c) Possibly an amphibious landing ship such as the Russian 'Jvan Rogor', which is capable of embarking a battalion of naval infantry.

(d) Logistics landing ship(s) (LSLs), designed for the logistics support of marines, such as the British Royal Navy's 'Sir Lancelot', 'Sir Percivale' and 'Sir Galahad', each of which is capable of supporting and replenishing a marine battalion group by holding 10 dayn' war maintenance reserve. Some shipping on these lines is an absolute must, both in the short and long-term, no matter what the size of the amphibious force envisaged.

Additional Logistics Shipping. The specialized shipping will itself need to be maintained and therefore additional fleet auxiliaries such as oilers and tenders will become necessary.

Assault Equipment. These would comprise mainly :-

(a) Amphibious assault equipment, for ship-to shore waterborne assault, including a selection/combination of the following :-

(i) Landing craft of various sizes, utilising both inboard and outboard power.

(ii) Amphibious assault vehicles, generally armoured, such as BMP ICVs, light tanks, or vehicles designed for this task, such as the US Marine Corps' LVTP7's.

(iii) Large air-cushion assault craft, such as the Soviet 'Aist' class, capable of rapidly landing a company group, would also be most useful, even if available in very small number.

(b) Heliborne assault equipment, such as suitable medium helicopters, and possibly even some light attack helicopters, for close support of the landed forces.

Logistics Support. This is probably the most problematic area in the entire concept, in terms of cost as well as those of staff work (ie, the organisation of logistics support in operations) physical readiness

and tactical vulnerability. The cost of the support required for any amphibious operation may, after cost-benefit analysis prove to be unaffordable to the nation. This logistics support would include the infrastructure that will need to be created to handle it, the shore bases and depots (ie, storage facilities) and the materials handling equipment.

ORGANISATION

Having seen that the cost of logistics support will probably be the prohibiting factor, it will automatically follow that the organisation will have to be so tailored as to be able to carry out possible tasks with minimal administrative back-up. Thus, mechanized amphibious assault units, a la the US Marine Corps, which require heavy logistics support in terms of shipping, quantities of FOL and ammunition, large amphibious workshops and numerous spares, are definitely out for a country such as ours.

The various existing foreign models may not be suitable as each nation has designed its own organisation to suit its own needs, priorities and finances. We should not hesitate in being innovative and designing our own equipment, and evolving our own tactics to utilise these to maximum effect. Organisations to allow these tactics the greatest scope and flexibility should be a natural outcome of the equipment and the tactics. Once a suitable organisation has been formulated, accepted, and initially implemented, interplay between the new equipment, tactics and organisation will suggest modifications and refinements in each. This is likely to happen in a sort of cycle, till a state of equilibrium is reached, which may last for a few years, till the equipment becomes obsolescent.

New Equipment. Some new equipment, which will have to be indigenously designed and developed, suggests itself as suitable for our country.

(a) *Light Armoured Amphibious Fire Support Vehicle.* Wheeled vehicles being mechanically less complex, cheaper and easier to maintain, the possibility of a 6×6 vehicle with an additional propeller drive should be examined, alongwith tracked and half-track vehicles. Even a 4×4 vehicle such as the Soviet BRDM-2 may prove to be suitable, if it can mount a gun turret. The

vehicle should be capable of being produced in three versions, viz:—

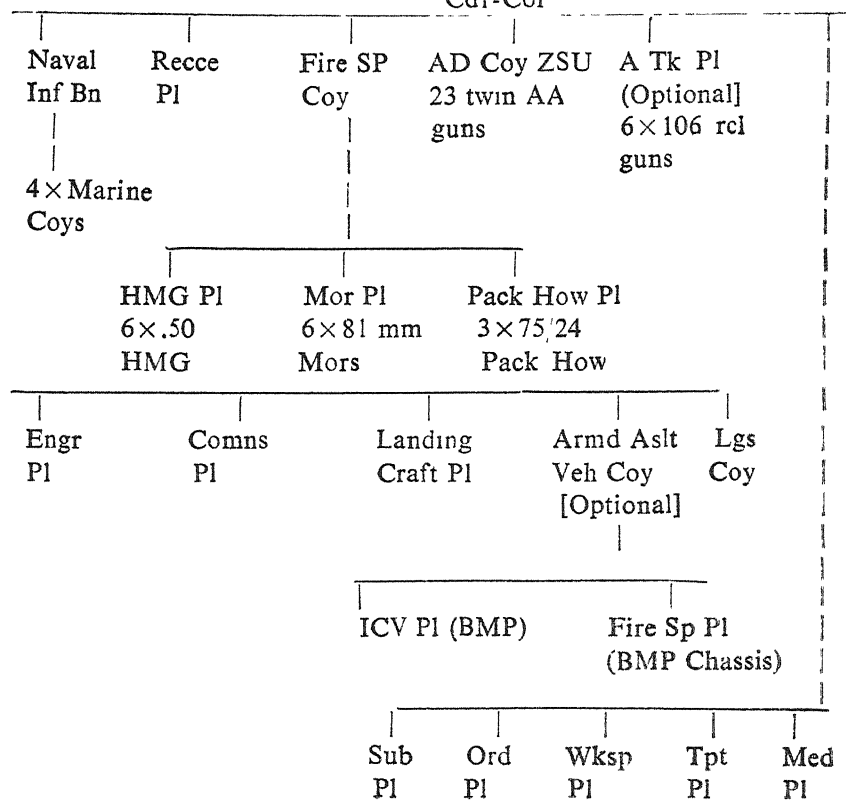
- (i) *Gun Variant.* With 90 mm or 105 mm gun turret.
 - (ii) *Mortar Variant.* With a 81 mm mortar mounted.
 - (iii) *Anti-Tank Variant.* With a 106 mm recoilless gun and an Anti-Tank Missile launcher mounted.
- (b) *Amphibious Assault Ship.* A ship which should meet the following qualitative requirements :—
- (i) Capable of accomodating a company group with its 'F', 'A' and 'E' Echelon loads.
 - (ii) Capable of lifting the 'F' Echelon vehicles of the company group, including supporting AFV sub-unit.
 - (iii) Fitted with a bow ramp as in LSTs.
 - (iv) Fitted with a helicopter deck having approx four operating spots for medium helicopters, a below-deck hangar and lift.
 - (v) Fitted with six guns of medium range and calibre for fire support of the landed force.

Long and Short-Term Organisations. Presuming that a division-sized amphibious force is neither necessary nor affordable, and that a battalion-sized force will perhaps not be enough to meet our requirements, a marine or naval infantry brigade would seem to be what we need. Since to equip even a brigade will turn out to be a rather expensive proposition, we should think of a long-term desirable organisation, which can be built around a short-term immediately affordable, core organisation. This short-term organisation could be called a Demi-Brigade and should, in effect, be a composite battalion group. These suggested organisations and that of a marine battalion, are represented below :—

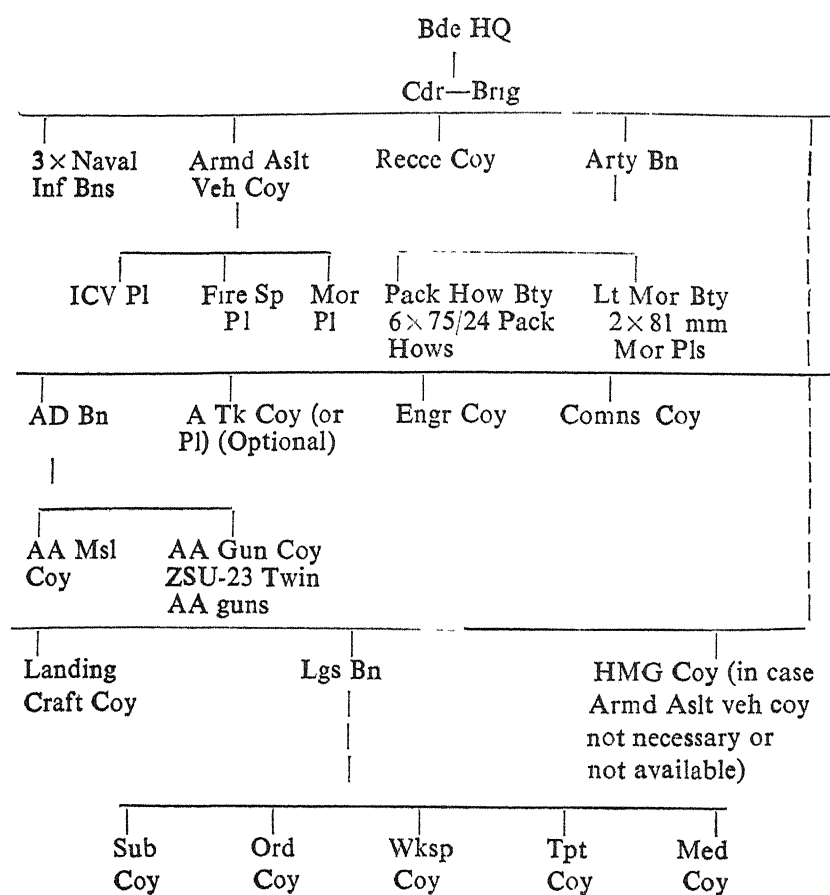
(a) *Marine Demi-Brigade*

Demi Bde—HQ

Cdr-Col



Note :—The Naval Inf. Bn. would have 4× marine rifle coys only in the Demi—Bde. These could be increased to 5 or even 6 coys in the transition phase from Demi—Bde to Bde, eventually stabilizing at 3 marine rifle coys per bn in the naval inf. bde.

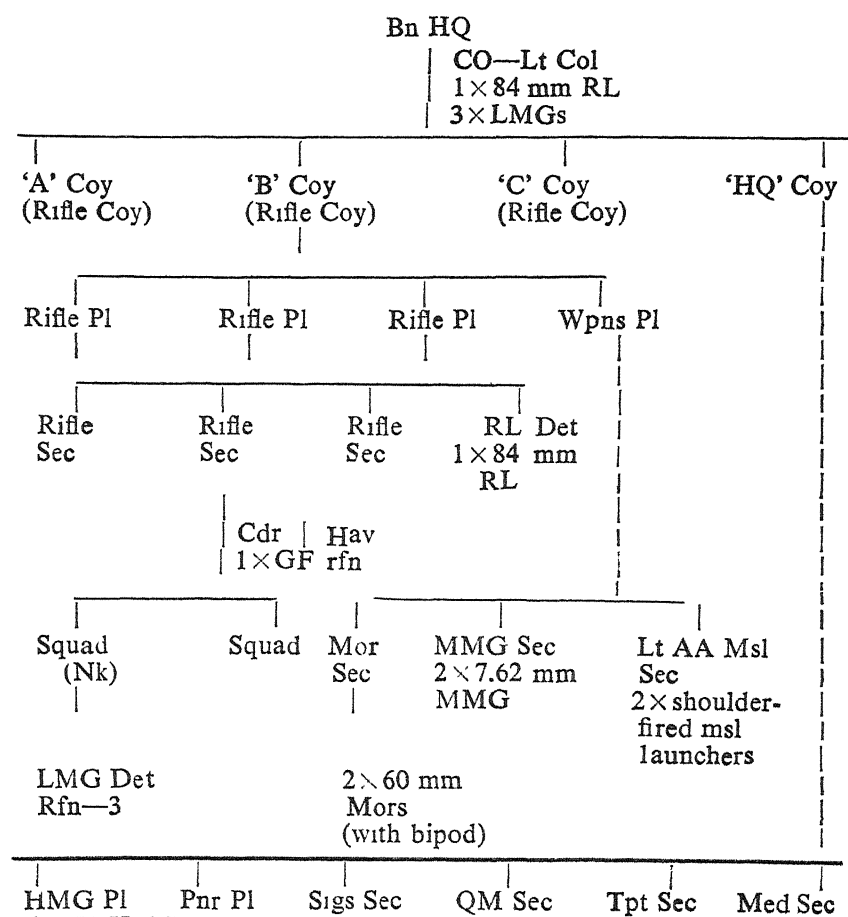
(b) Naval Infantry Brigade.

Note :—Marine coys in the Naval Infantry Battalions should have companies designated as follows :—

1st Battalion—'A', 'B', 'C', 'HQ' Companies.

2nd Battalion—'D', 'E', 'F', 'HQ' Companies.

3rd Battalion—'G', 'H', 'J', 'HQ' Companies.

(c) Naval Infantry BattalionWpns Summary

.50 HMG	— 6
7.62 mm MMG	— 6
7.62 mm/5.56 mm LMG	—57
84 mm RL	—10
60 mm Mor	— 6

Pers Wpns

Long-term	—5.56 mm Aslt Rifle
Short term	—7.62 mm Short-brl SLR

9 mm Machine Carbine

Tpt

Truck 1.5 ton	— 8
Jeep/Ultra carrier	—16

Logistics Organisation. The logistics organisation will be a crucial component of both the short-term Marine Demi-Brigade and the long-term Naval Infantry Brigade and needs to be carefully considered and decided upon. This is one organisation for which a suitable foreign model does, in fact, exist, in the shape of Britain's Commando Logistics Regiment Royal Marines. This logistics organisation under one head was evolved for the logistic support of 3rd Commando Brigade Royal Marines, which has been in existence since 1962. The Commando Logistics Regiment has proved its worth in practice, being flexible and responsive to tactical requirements. Its existence possibly spelt the difference between success and failure in the Falklands, where it supported not only its own brigade of three Royal Marines commandos and an artillery regiment, but two additional Parachute battalions and an entire additional infantry brigade (5 Infantry Brigade) as well. Its outline organisation, as well as the tonnages handled by it, are given in Appx. 'A'.

BASIC TRAINING

With overall command and control being, of necessity, that of the Navy, there remains the question of training. Training of the marine force should start from a base of elementary naval training with Navy recruits to create familiarity with naval terms, routines, procedures, boat and rope handling and life aboard ship. This could be followed by basic infantry training, conducted by one of the infantry regimental centres located in peninsular India, such as that of the Maratha Light Infantry. All marines, irrespective of subsequent specialization, should be trained first as infantry men. This basic infantry training by the army will greatly reduce both establishment costs and costs of individual training. Basic infantry training should be followed by air portability and air assault training at naval aviation training establishments.

OPERATIONAL TRAINING

The marine force needs to specialize in two major forms of operation, viz:—

- (a) *Amphibious Assault.* In LSTs, LCUs or other craft, launching a surface assault on a hostile shore.
- (b) *Heliborne Assault.* From ship to hostile shore.

Both the above require a high degree of individual and collective training as well as familiarity with ships and operational efficiency with all types of boats and helicopters. Later, perhaps, the necessity

of operating hovercraft may arise, as these would be a boon on the mud-and-mangrove flats that characterize so much of the coastline of the Bay of Bengal littoral.

Specialized infantry, artillery, engineer and other ground-force training can easily be covered at existing army schools of instruction. Collective training would, of course, have to be organised on the usual Army pattern and should pose no problem.

DRESS

The force should be distinctively dressed, the following (summer) dresses being suggested:—

- (a) Normal Working Dress. OG shorts and short-sleeved shirt, canvas belt of thin material, rifle-green or black nylon stockings, black shoes and rifle-green beret with a golden anchor badge. Trousers in lieu of shorts & stockings should also be permitted as per Navy usage.
- (b) Dress Whites. While parade wear similar to the Navy's, but with corps—coloured cummerbund and rifle-green peaked caps.
- (e) Combat Dress. Camouflage—pattern jacket, trousers and cap similar to the Army's.

BADGES OF RANK

- (a) Officers'—identical to the Army's, in golden anodised metal.
- (b) Junior Commissioned Officers should be called Petty Officers and wear insignia similar to Naval Petty Officers.
- (c) Other Ranks—to follow the Army system.

Branch Insignia. Insignia indicating infantry, engineers, etc, should be worn as metal collar dogs by officers, and following the naval system of sleeve patches for others. Army—style shoulder-titles should not be worn as all personnel should identify strongly as members of one corps.

HISTORICAL PRECEDENT

In the past several marine battalions existed in the East India Company's Army—one, the famous Marine Battalion of Bombay, actually saw action at sea against a warship of the USA; the only occasion upon which any portion of India's forces have fought against Americans. But the only existing direct survivor of these marine units, which at one time were engaged in the fights of the old

British Indian Navy from Macassar to Mauritius is the battalion raised in 1820 as the 2nd Marine Battalion of the 12th Regiment of Bombay Infantry, and which is now Pakistan's 1st Battalion, The Baluch Regiment.

Bombay and Bengal Marines. The famous Marine Battalion of Bombay was raised in 1777 as the 1st Marine Battalion, earning the battle honours 'Persian Gulf 1819', 'Beni Boo Ali 1821' and 'Abysinia 1868', and going through numerous title changes till it was converted to pioneers in 1903. Its final title was 10th Marine Battalion. The Bombay pioneers, when it was disbanded in 1933 along with all other pioneer units of the time. Its uniform colours as marine infantry had been red coats (in common with the rest of the Army), with green facings and gold lace. The Marine Battalion of the Bengal Army was raised in 1796 and was known as the 25th Regiment of Bengal Infantry when it was disbanded in the cataclysm of 1857, having been dressed throughout in red coats, with blue facings and gold lace.

Surviving Link. The only existing Indian Army unit with a traceable link to those early Indian Marines is what was the 1st Battalion The Grenadiers (now a battalion of the Brigade of Guards) which was raised in 1778 from the grenadier companies of the existing Sepoy Battalions of the Bombay Army and two grenadiers companies of the then-newly-raised Marine Battalions.

RECRUITMENT AND CLASS COMPOSITION

The marine infantry element should be organised on a mixed-classes basis, with 50% of the personnel recruited from coastal villages or towns. This will ensure that the traditional knowledge of tides, winds and sea-lore, as also a certain degree of familiarity with boats which coastal people possess, is available within the force, to be built upon with specialized military training. The other elements of the corps need only have 30% coastal personnel, with the rest, as in the marine infantry, from all over the rest of the country.

CONCLUSION

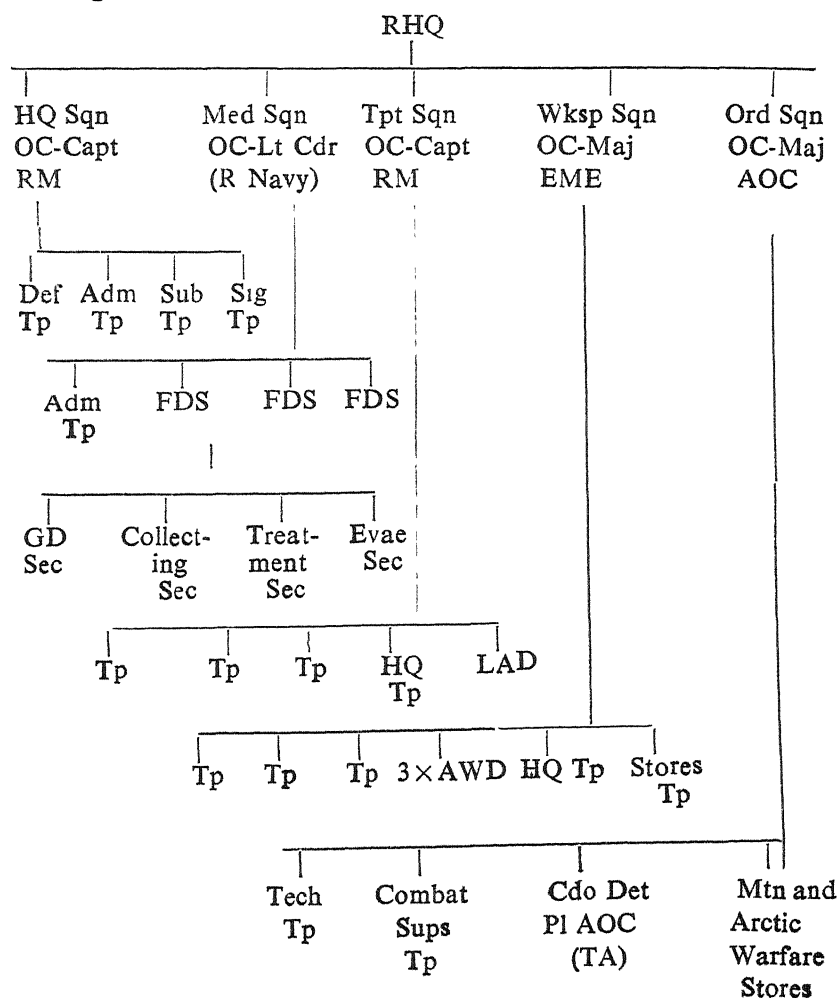
For comparison, the major foreign amphibious forces are briefly outlined at Appx 'B'.

If we have to create for ourselves a suitable amphibious option in the near future, we would do well to think ahead, but start small, with a force that can be expanded gradually as finances permit. Such a beginning would be prudent as it would allow us to develop the

APPX 'A'

COMMANDO LOGISTIC REGIMENT ROYAL MARINES

1. Organisation.



2. Stores Handled During Falkands Campaign by Cdo Lgs Regt RM.

Tonnage outloaded from UK	—17,000 Tons
Amn off loaded at Ajax Bay (Beach Sp Area/Maint Area)	— 3,500 Tons
Amn moved from Ajax Bay to Teal Fwd Bde Maint Area (FBMA)	— 1,200 Tons
Amn moved from Ajax Bay to Fltzroy FBMA	— 1,000 Tons
Amn moved from Teal EBMA to DP	— 36 Tons
Tonnage of rations moved	— 1,590 Tons
Fuel moved	— 1,414 Tons
Def & Tech Gen stores moved	340 Tons
(Courtesy :— British Armed Forces, May & Jun 1983.)	

*APPX 'B'***OUTLINE OF MAJOR FOREIGN AMPHIBIOUS FORCES****U.S. MARINE CORPS (USMC)**

The world's largest amphibious force with three active divisions and three active air wings (the Marine's own aviation corps including fighter ground support aircraft), plus one division each of reserve, the USMC has 188,100 personnel on active duty, with the majority assigned to fleet marine forces. The corps is organised in two major combat forces—one with the Atlantic Fleet and one with the Pacific Fleet.

Marine Division. The division has about 17,000 Marines plus Navy medical personnel. Its basic structure is :—

- (a) Nine infantry battalions, each with four rifle companies.
- (b) Light artillery regiment (3 × 105 mm artillery battalions).
- (c) Heavy artillery unit (M 107 175 mm SP gun).
- (d) Tank battalion (approximately 70 tanks).
- (e) Tow Anti-tank missile company (72 Tow launchers).
- (f) Amphibious tractor battalion of nine companies (approximately 50 LVTP 7s each).

Marine Aircraft Wing. The typical USMC aircraft wing has approximately 14,000 Marines and Navy personnel, and operates approximately 250 tactical fixed-wing aircraft and 190 helicopters.

Marine Air-Ground Task Force [MAGTF]. MAGTFs are tactical groupings that are formed as required and consists of elements of the three active division/air wing teams. The three basic TFs are:—

- (a) The Marines Amphibious Unit (MAU).
- (b) The Marine Amphibious Brigade (MAB).
- (c) The Marine Amphibious Force (MAF).

MARINE AMPHIBIOUS UNIT (MAU)

- (a) The smallest MAGTF, of approximately 2,500 Marines.
- (b) *Ground Combat Element.* A Battalion Landing Team, organized around an infantry battalion re-inforced by 5-7 tanks, an artillery battery, TOW Anti-tank weapons, and reconnaissance amphibious assault vehicle and combat engineer sub-units.
- (c) *Aviation Elements.* A Marine Air Squadron, usually helicopters, but may include Harriers and fixed-wing observation aircraft. It is normally embarked aboard Navy amphibious ships, but may also be airlifted.

MARINE AMPHIBIOUS BRIGADE (MAB)

- (a) Personnel strength may vary between 7,000 and 16,000 Marines.
- (b) Organised around a Regimental Landing Team comprising:—
 - (i) Two to five infantry battalions.
 - (ii) An artillery battalion.
 - (iii) A tank company.
 - (iv) A combat engineer company.
 - (v) A reconnaissance company.
 - (vi) An amphibious assault vehicle company.
- (c) *Aviation Component.* A Marine aircraft group, the smallest aviation unit designed for relatively independent operation, may have both fixed-wing aircraft and helicopters.
- (d) Combat service support is provided by a Brigade Service Support Group.

(e) Each of three Marine division/air-wing teams is prepared to rapidly deploy one MAB.

(f) Approximately 20 ships are required to carry one MAB.

(g) Example 7th MAB—Part of America's RDF, has a strength of approximately 12,000.

MARINE AMPHIBIOUS FORCE (MAF)

(a) This largest MAGTF is organised around a division/air-wing team and its force Service Support Group. It may grow to approximately 53,000 Marines and Navy personnel. The three active duty division/air-wing teams are organised for war as MAFs.

(b) 50 ships are needed to move an entire MAF.

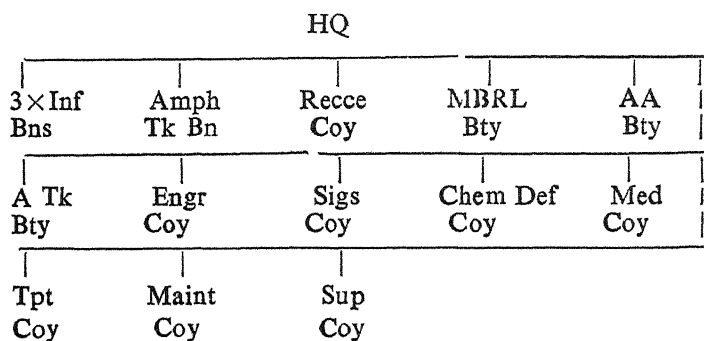
Amphibious ships. The US Navy has 67 amphibious ships available at present.

SOVIET NAVAL INFANTRY

The Soviet Naval Infantry has a total personnel strength of approximately 12,000 split between the four fleets, and equipped with about 100 large amphibious craft and 50 assault hovercraft (200 tonne, company group assault lift capacity).

Their primary task is to be the assault force to seize a beach-head, so that the main forces, of tank and mechanized divisions, can be landed safely. They are most likely to be used to capture vital bottle-necks essential to Soviet naval security, such as the Skagerrak and Kattegat. They may also be tasked to seize port facilities and to provide personnel for commando raids on coastal targets.

ORGANISATION: SOVIET NAVAL INFANTRY REGIMENT



BRITISH ROYAL MARINES (BM)

The Royal Marines' major units are four RM commandos (ie, battalions) and an artillery regiment (29 Commnado Regiment Royal Artillery)' three of the commandos being grouped into 3rd Commando Brigade RM, which may be tasked to operate any where in the world. The RM battalions which, participated in the Falklands campaign under 3 Commando Brigade were 40 Commando, 42 Commando and 45 Commando. The brigade also has an Air Squadron equipped with nine Gazelle and six Scout helicopters and an engineers company (59 Independent Commando Squadron, Royal Engineers). The artillery regiment has four batterys equipped with helicopter-portable 105 mm field guns firing 14 7 kg shells.

FRFNCH AMPHIBIOUS FORCES

The French rapid-deployment force, the Force d' Action Rapide (FAR), includes their 9th Marine Light Division. The French also have a smaller Rapid Intervention Amphibious Force, their 3le Brigade, which comprises one Marine Parachute Battalion, one Marine Artillery Regiment and one infantry battalion of the French Foreign Legion.

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INDUSTRY IN INDIA

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Airland Battle-2000

Applications in the Indian Context

MAJOR GD BAKSHI

INTRODUCTION

CREATIVE and original quantum jumps in military thought and doctrine occur but rarely in human history. When they do their impact on world events can be shattering and decisive. The best illustration of this is provided by the German "Blitz Krieg" that revolutionised warfare in this century. It was a "psycho-mechanical" concept. The new technological innovations of the tank, the aircraft and improved radio communications were welded by a new doctrine into a rapidly moving instrument of shock that caused the psychological collapse of the allied armies in Europe. It was not that the Polish, French or British armies did not have tanks, aircraft or radio. Technologically the sides were evenly matched. But the German doctrine of the Blitz Krieg was a conceptual quantum jump ahead. It altered the paradigm of military conflict. The static minded allied armies, still wedded to World War I concepts of trench warfare, were shattered by the impact of the massed tank-aeroplane combine that relied on mobility and shock action.

Developments in military art therefore have two major facets:—

- (a) The Technological.
- (b) The Conceptual.

We can afford to lag behind in neither. The two must proceed in tandem; obsolescence of thought is even more dangerous than obsolescence of weapons and technology.

Airland Battle—2000. During the past two years the US Army has undergone a rapid evolution of doctrine in terms of how the ground conflict, especially that in Central Europe will be waged. This evolving doctrine has been set forth in two significant Field Manuals (FM's) :— FM-100-I "The Army" and FM-100-5 "Operations". The USA is mobilising its technological efforts for the

future battle field environment. The concept is currently referred to as Airland Battle-2000 concept. It is this concept which is intended to be the guideline for the technologies and weapon systems with which the USA will fight the European War by the year 2000. The concept though not "revolutionary" is nevertheless a significant "evolutionary" advance in military thought. It gives a clear indication of the shape of things to come. It provides the doctrinal overview that will guide military Research and Development (R&D) till the end of this century. It is imperative that we study this new doctrine and examine what implications it has for us on the subcontinent.

Justification for the study. We missed the industrial revolution in the 19th century and we paid the price for it by losing our freedom. The World is today in the throes of the third revolution—the electronic revolution. We can not afford to miss this revolution and lag behind once more. The Airland Battle 2000 concept is generally deemed synonymous with esoteric technology. It is not so. As Maj Gen Crosby-E-Saint, Dy Comdt of the US Comd and Gen Staff College (The Chief author of FM-100-5 Operations) said, "The whole doctrine is founded on a mind-set", an attitude. We have to keep pace not only with the rate of technical change but also with the doctrinal or attitudinal change. Without this the sophisticated technology that we may buy or produce indigenously would be useless.

The Airland battle 2000 concept is of significant concern to us for the situation confronted by us is, surprisingly, quite similar. In Europe NATO forces are committed to not losing any territory in Germany. Hence the earlier NATO Active Defence concept had a great deal of similarity with our static defences in the West. Our pamphlets happily pointed out that our version of "Positional defence" was not outdated and dull. The NATO countries were equally committed to it. The USA has broken free of that commitment. Those of us who look up to the West for our inspiration must follow suit. In that respect this article, therefore, is a sequel to the animated debate on the DCB defences that was conducted recently in some of our professional journals. It points a way out of our static and defensive morass.

HISTORICAL DEVELOPMENT

The 1976 American version of FM-100-5 was committed to Active Defence. The US Army was fresh out of the Vietnam debacle.

The pessimism of that period percolated the manual. The last phrase of its first chapter said "The US Army must be convinced it will win". It tacitly acknowledged the political and military realities of that period :—

- (a) That space could not be traded for time in the Federal Republic of Germany (FRG).
- (b) NATO had to deal with the overwhelming conventional superiority of the Warsaw Pact forces in Europe especially in tanks (19,000 tanks VS 5000 of NATO)

Active Defence reflected the tactical implications of the strategy of Flexible Response that had replaced the strategy of Massive Retaliation after the Cuban missile crisis of 1962. Flexible response envisaged a step by step escalation from the conventional to the tactical nuclear and then finally culminating in a strategic exchange between the USA and USSR. As a primarily conventional conflict became a distinct possibility the inadvisability of losing terrain in Germany became apparent. Active Defence as outlined in FM-100-5 laid emphasis on:—

- (a) Fire power and attrition.
- (b) Advantages of Defence and the use of fortifications.
- (c) Winning the first battle.
- (d) It focussed on battalion, brigade and division activities and in effect downgraded corps and echelons above Corps (EACs), theatre and Field armies and their supporting elements were eliminated.

At the doctrinal levels what emerged was quite similar to what we have on our Western borders. The emergence of this "Maginot mentality" drew a strident chorus of protest. Field Commanders felt that even though they might win against the leading echelons of the Pact Forces, they would be unable to withstand the follow on forces.

Central Battle Concept. Changes were therefore made to the doctrine and the next step was the Central Battle Concept. This concentrated on Ops on the FLOT (Fwd line of own troops) and the extensive use of covering forces and fire power. The concept of force generation was closely allied with this doctrine. However the debate did not subside. A series of studies such as "Division-86" and "Army-86", followed and some new concepts were proposed.

An analysis of the 1973 Arab-Israeli war provided some very valuable inputs.

Airland Battle 2000 Doctrine. The Airland battle 2000 doctrine that has emerged is a combination of three concepts :—

- (a) The concept of the Extended Battle Field.
- (b) The concept of the Integrated Battle Field.
- (c) Battle Field Air Interdiction (Or the Air-mechanised responses to the armoured threat in the 1990s). The name air-land derives from this concept. These three concepts will be outlined in detail subsequently.

In essence the Airland Battle 2000 doctrine was a response to numerous outside pressures. The “tooth to tail” debates of 1974 leading to the Nunn amendment also crystallised the perception that the US Army had become fire-power or attrition dependent. The Airland doctrine once again emphasized manoeuvre and mobility. It was “Win-Oriented”. Its chief aim was to get the US commanders out of the defensive minded rut of the post war period. This concept seeks to exploit the Soviet vulnerabilities of a rigid, top-down command and control structure and the predictable echelonment of their forces. In essence it implies deep attack by highly mobile ground mechanised forces and airforces equipped with smart weapons to destroy the Soviet second echelon Forces. This would disrupt the Soviet time schedules and prevent deep penetration of NATO defences. NATO forces would then be able to seize the initiative and exploit the “windows” for a decisive counter offensive. It implies aggressive action at all levels. In more prosaic terms the reserves at the brigade, divisional and Corps levels would not be employed merely at the FLOT to counter attack or contain enemy penetrations but would strike deep at the unsuspecting follow up echelons and command and control structure of the enemy. By creating unforeseen situations for the attacker they would endeavour to unhinge him, disrupt his plans and seize the initiative at the earliest. The “Knee-Jerk” reactions of highly predictable counter-penetration and counter attack drills would be replaced by the unexpected forays into the enemy’s rear. In classical terms of Liddle Hart’s theory this would bring about a “dislocation of the enemy commanders mind”. It would lead to a collapse of the will that could halt his attack in its tracks. What is most significant, however, is the fact that the Airland Battle 2000 doctrine is a conceptual blue print of how American soldiers will be employed and equipped for combat during the year 1995

through 2015. This basic concept will guide technology and R&D into what is called "The concept Based Requirement system" to produce the new generation of weapons and C3I systems for the future Battle Field.

THE CONCEPT

Having traced its historical development let us now analyse the concept in detail. For ease of understanding we will take it up in two parts :—

- (a) The Conceptual.
- (b) The Technological.

THE CONCEPTUAL ASPECT

As said earlier, the Airland Battle 2000 doctrine is an umbrella concept that unites three inter-related concepts:—

- (a) The Extended Battle Field Concept.
- (b) The Integrated Battle Field Concept.
- (c) The Battle Field Air Inter Diction (Or Air-Mechanised Battle) Concept.

The Extended Battle Field Concept. This concept grew out of the American Army's self perceived need to get out of its defensive minded rut and replace its overreliance on "attrition with manoeuvre." It was propounded by Gen. Starry in Mar 81 issue of the Military Review. It was followed up by Lt Gen Richard's (Chief of Staff Ops and plans US Army) article on "Winning on the Extended Battle Field"

To quote Maj LancasterArmor, Jan-Feb 82 issue "The Extended Battle Field embodies operations that are conducted within the frame work of a strategic defense in which the Enemy is attacked to the full depth of his-formation with the explicit goal of initiating early offensive action to bring the conflict to a favourable conclusion. The concept requires the use of national and joint service air and land assets for both target acquisition and attack, hence the notion Air-land".

In simpler terms, in a situation where political imperitives rule out the loss of territory, one way to minimise such loss during the conduct of a defensive battle would be to extend the battle into the enemy's rear as soon as possible. The best example for this would

be Ariel Sharon's counter crossing of the Suez to encircle the Egyptian Third Army in 1973. As Gen Starry has pointed out the battle and the battle field are extended in three ways:—

- (a) Extended in Depth.
- (b) Extended in Time.
- (c) Extended in Scale.

Extension in Depth. This implies engagement of enemy units not yet in contact to disrupt the enemy time table, complicate command and control problems and frustrate his plans thus weakening his grasp on the initiative.

Extension in Time. "The battle is extended forward in time to the point that current actions (Such as attack on follow on echelons, logistical preparations and manoeuvre plans) are interrelated to maximise the likelihood of winning the close in battle as time goes on". Simply stated it implies looking and thinking ahead and marshalling the fire support and logistic support well in time. The Ops staff must be at least 48 to 72 hours ahead of the current battle field situations.

Extension in Scale. "The range of assets figuring in the battle is extended towards more emphasis on higher level army and sister service acquisition means and attack resources". The Air Land Battle implies "looking deep and striking deep". To see deep the requisite intelligence resources would normally be available with the higher headquarters (that is division and above)." The means to strike deep aircraft, missiles and mechanised forces would also be available at these levels. The Corps Cdr in effect becomes the director of the Airland Battle. This has marked a significant shift in the US thinking. Between the tactical level of the division and the strategic levels of the echelons above Corps (EAC) a new level has been introduced — the level of operational Art. Lt Col John S Doerfel has defined this as the theory and practise of large unit (Corps and Army) Ops, the use of battles and their results to attain a military goal. This is in consonance with German and Soviet military practise during world War II. New FMS (FM-100-15 Corps Ops and FM-100-16 Echelons above corps are under publication).

The Intergrated Battle Field Concept. As defined by Major Lancaster, this describes conflict in which a "Spectrum of Lethal weapons are used to destroy or otherwise render ineffective an enemy

force. This comprises nuclear weapons, chemical weapons, conventional weapons and radio electronic combat".

Battle Field Air Interdiction Concept The advent of the attack Helicopter as a major tank killer has brought a significant evolution in the technique of combat. The Attack Helicopter is one of the most potent anti-tank weapon system developed so far. In addition the advent of "Smart munitions" (ed Maverick, Assault Breaker, SADRAM, CYCLOPS etc.) have further enhanced the anti-tank spectrum and reduced the number of sorties required to destroy a tank force. Though as of now the attack Helicopters can not replace the tank it will play an increasingly important role as highly mobile antitank weapon system both in offensive and defensive operations. The Air-mechanised response (The tank and attack helicopter combination) coupled with aircraft and missile delivered smart weapons seems to be the answer to the War Saw Pact's nightmarish tank superiority. It would appear to be the ideal weapon system for deep battle field interdiction of the Soviet second echelon forces. It extends the defenders reach up to 300 miles behind the frontline for swift and decisive strikes on the follow on echelons. Hence integration of these Air resources form a major leg of the Airland concept. The mechanised force and the Air force would have to operate as part of a very close knit combined-arms-team. That is the core of the Airland Battle concept.

Exploiting Soviet Vulnerabilities. A study of the preceding concepts reveal that they are tailor made to exploit the Soviet weaknesses and to match the future Battle Field environment. The main Soviet vulnerabilities that the air Land Battle doctrine seeks to exploit are:—

- (a) Top down C3I (rigid command and control set up)
- (b) Limitations and restrictions on the amount of training the Soviet and WarSaw pact forces possess.
- (c) A Strong Soviet commitment to the second echelon concept.
- (d) The high density of troops and vehicles that will be in any given battle field area per kilometer.
- (e) Some space time scheduling problems associated with "expected" performance of Soviet Forces and the "likely" performance of these forces once engaged in battle.

The Future Battle Field Characteristics. The characteristics of the Central European Battlefield as envisaged by the Airland Battle theorists are:—

- (a) Large quantities of sophisticated weapon systems.
- (b) Highly lethal air and ground environment with prohibitive casualties.
- (c) *Non-Linear nature of the battle field.* There will be no fixed front and rear. An intense central battle will be waged concurrently with deep rear area battles. Isolated "islands" or "pockets" will have to fight on their own for prolonged periods. Very high intensity will be encountered at the decisive point.
- (d) Qualitative parity between opposing forces.
- (e) A growing difficulty of maintaining C3I systems with US and Soviet forces. There will be need for decentralisation.

Modalities of the concept. Keeping the future Battle field and the Soviet vulnerabilities in view how would the US corps Cdr translate this concept into action?

- (a) His first requirement would be to look deep, to identify the second echelon and the reserves and the C3I facilities of the attacker
- (b) Having identified these he must hit them with his fast mobile forces. The objective of the deep attack would be "Force Oriented" rather than "Terrain Oriented". These deep attack forces must:—

- (i) Rapidly transit the FLOT.
- (ii) Drive deep
- (iii) Conduct lethal and violent attacks on the move and destroy high value elements of the uncommitted echelons.
- (iv) Refuse decisive engagements.

(c) By such deep attacks he will dislocate and disrupt the enemy offensive. He will thereby provide his subordinate Cdrs the space and time to win and create opportunities for a major decisive counter offensive.

FM-100-5 lists four requisites for success in the Airland battle Field :—

- (a) *Initiative*. This implies an offensive spirit and the ability to seize the initiative from the enemy to make him react to our moves.
- (b) *Synchronisation*. This implies more than just coordination. It entails unity of effort, designating and sustaining the main effort and exploiting enemy vulnerabilities.
- (c) *Agility*. Flexibility provided by rapid decision making and action and decentralisation.
- (d) *Depth*. In time, distance and resources.

THE TECHNOLOGICAL ASPECT

Often in the past, technology drove tactics. Planners waited for new equipment to appear and then accommodated tactics to the gear. The Airland Battle doctrine has replaced this haphazard process with a Concept-based-Requirements System. This has stopped the "tail wagging the dog". For now the US Army looks out to the future battle fields and very carefully plans for the needed equipment. The prohibitive costs of defence R&D are therefore under taken in a planned and judicious manner. Technology is geared to the specific needs of tactical concepts and future battle field environments. This allows planners to use off the shelf equipment today while ordering their needs for tomorrow.

As a concept the Airland Battle doctrine can be implemented even today with current state of the art equipment. However, (as will be discussed in detail subsequently) there are a number of practical difficulties in executing the concept with present day mobile forces. It is debatable whether adequate mechanised reserves exist with NATO to undertake such deep attack missions and whether they can disrupt the Soviet second echelons without becoming decisively engaged themselves. This is where the technological aspect of this doctrine assumes great importance. With the advent of smart munitions and attack helicopters a highly cost effective answer seems to have been found for the Warsaw Pacts overwhelming tank superiority. The air arm, suitably equipped with the new smart (or brilliant) munitions, can best carry out this deep interdiction of Soviet follow on echelons. The new zone of interdiction is supposed to extend in depth from 5 to 300 miles ahead of the FLOT. To see, acquire and attack targets at this depth requires the most sophisticated level of technology.

Look Deep. A major R&D effort is on to design and produce the future surveillance and acquisition system. One of the concepts being worked on is the VISTA (Very Intelligent Surveillance and Target Acquisition) concept. At the heart of the surveillance system will be a group of "netted" radars (Integrated monitoring stations) which would perform warning and surveillance functions. Very High speed circuit technology would be the key to the systems performance and will allow for the rapid dissemination of information obtained. Such systems will have to be Jam proof and miniturisation must enable them to be based on board vehicles, within small command posts or OPs. RPVs will be integrated with this system and satellites will continue to play a major role.

The C 3I systems will have to be made totally secure against Soviet electronic warfare measures. New burst communications techniques are likely to be employed for this purpose. Their battle field survivability has also to be enhanced. This will require design modifications.

Strike Deep. This is where technology is stepping in a big way. Dr Manfred Vorner, the West German Defence Minister has pointed out that previously it used to require about 5,500 Aircraft sorties delivering 33,000 tons of gravity bombs to destroy a Soviet Army Group exploiting a break through. Current improved munitions, he said, let that job be done with about 600 sorties and only 3000 tons of ammunition. But the next generation of terminally guided, anti-armour, sub munitions will require only 50-100 sorties and about 500 tons of munitions. This new technology, he said would provide a way for NATO to significantly reduce its reliance on short range nuclear systems.

Brilliant Munitions "US technology is today concentrating upon the next generation of "brilliant" munitions. The difference between today's generation of "Smart" weapons and the future generation "Brilliant" weapons will be the latter's ability to be autonomous and self contained and the ability to "recognise" and Classify" enemy targets and take effective action against such targets. The US Assault Breaker Pavemover Concepts is a pointer to the future weapon systems that will dominate the Airland Battle Field. These "brilliant" weapons will eliminate the vulnerability of close air support aircraft and provide high fire power and all weather kill capability. Current programmes centre on a wide variety of weapons including:—

- (a) *Cluster Weapons* (eg SUU-30 dispensers for BLU-61, 63 and 83 and CBU weapons in the 500 lb class.
- (b) *Combined Effect Munitions (CEM)* Series of 202 bomblets in one dispenser.
- (c) *Air Delivered mines*. Eg the Gator (CBU-89) programme.
- (d) *Extended Range Anti Armr Munitions (ERAM)*.
- (e) *Launch and Leave Glide Bomb (LL 6B)*. This will be a toss bomb.

Ramjets and leiquid propellant technology are promising areas of break through. Ramjets will be used for high speed and ultra high speed missiles. Leiquid propellants like Han, Amine Nitrates and Alphatic propellants might replace the present conventional projectiles and case ammunition system of the artillery. New shells and "Seekers" (Millimeter wave radars and IB based seekers) and Ammunition. Delivery system are likely to revolutionise artillery Fire support.

These are areas that we in India will have to monitor carefully. What is important for us to remember, however, is the Concept Based Requirement System. As Felter said, "The Army can not be pushed by technology, we have to help lead the development. We have to lool very realistically at tomorrow, to the year 2000 and beyond and tell industry what we need. We have to be exact. With the high dollar costs of today there is no more, nice to have equipment".

OBJECTIONS TO THE CONCEPT

A study of the current American and European military literature high lights the intense debate that the new concept has generated. A number of pertinent objections have been raised. The salient ones are as under:—

- (a) *Utilisation of Scarce Reserves*. Col Trevor N Duply had pointed out in the Sep 82 issue of the Armed Forces Journal Inter National that if "the War Saw Pact forces can defeat our defence forces with their first echelon, it makes no difference if we do any damage to or delay the second echelon. We could jeopardise the ability to stop the first echelon if we divert resources to attack the second echelon. This is the most pertinent objection. It would need considerable "Will" and nerve on the part of NATO Cdrs to ignore the break through of the Soviet First Echelon and utilise their limited reserves for attacks on the second echelon.

(b) *Perils of Deep Attack.* Lt Col Holder has pointed out the following disadvantages involved in deep attacks:—

- (i) Operating with less artillery support than normal.
- (ii) Operating directly under the air defence envelope of the Warsaw Pact forces.
- (iii) Operating within immediate range of their radio electronic combat units.

(c) *Locating the Second Echelon.* C.N. Donnelly has pointed out in the Sep 82 issue of the International Defence Review that there is no second Echelon *per se*. One has to ask 'Second echelon of What'? The Soviets use a formation called Operational Manoeuvre Group (OMG). This may consist of upto one or two tank or mechanised armies and is meant to exploit the initial break throughs. The deep attack forces could well mistake this battle ready formation for the second Echelon and suffer defeat in detail

All these objections only serve to stress the value of the Technological component of this doctrine. Deep Interdiction is best done from the air using bombs and missiles armed with the new generation brilliant munitions.

APPLICATIONS IN THE INDIAN CONTEXT

Having dwelt upon the Air Land Battle doctrine in detail it is now pertinent to ask as to what is in it for us? The concept itself (sans the esoteric technology) has a number of relevant lessons for us even today. This is so because in effect it is the outcome of a very similar attempt to outgrow the "Magenot line mentality". Some of the salient lessons will be discussed in the succeeding paragraphs:—

Out growing the Defensive Rut. The Airland Battle concept represents a radical American attempt to outgrow the defensive 'mind set' of the Active defense phase. It is an attempt to restore 'Manoeuvre' to an army that had become overly dependant on attrition, fire power and fixed defences. Similar political constraint of not losing any territory have forced us to resort to fixed linear defensive systems on our Western borders. Such reliance on fixed defences is apt to lead to a defensive or Magenot mentality which we must consciously fight and uproot. Fixed defences can "Fix" conceptual thought and retard progress. To that extent the Airland Battles manoeuvre and "Win-Oriented" philosophy offers us a way out. It is worth emulating.

Extending the Battle Field. This concept is of the utmost value for us in the context of the DCB or even the desert environment (which is non-linear). Where loss of territory is unacceptable, the best chance of minimising such loss in the conduct of a defensive battle is by using our formation reserves to strike deep and disrupt follow up echelons of the enemy. However, since our likely adversary in the West does not follow the echeloned system of attack, we will not be required to go as deep. Anything between 2-10 Kms would meet our needs admirably given the present dispositions of the two armies.

Extending the DCB Battle. Though the concept of "spoiling attack is discussed extensively by us little is seen in practise. An extension of the Airland Doctrine to our scenario would imply that at least one or more of our brigade level, divisional level or Corps level counter attacks should not be launched on the enemy bridge head but beyond the DCB on the enemy's crossing control organisation and assembly areas. We could achieve tremendous surprise by this unexpected reaction. Surprise is a great force multiplier and we could completely disrupt the enemy's time frame of operations and leave him vulnerable to our counter offensive. Keeping the space time frame of operations in view, it is suggested that we should launch our divisional level counter attacks not on the obstacle line to eliminate the enemy bridge head but immediately behind it to disrupt his build up and logistic support. The Corps level counter attack would then annihilate the attacker so knocked off balance. The aim would not just be to stop the enemy but to disrupt and finally destroy him. The same technique can also be practised in the "non-linear 2 environment of the desert.

Operational Art. Today we have no inter-mediate level between tactics and strategy. The Germans have an intermediate level of "Operations". The Americans have also accepted the validity of this principle. Operational art is the scale applicable to Corps and Army Level formations. We need to emulate this concept and develop our doctrine and techniques at this level of "Operational Art". This will facilitate the introduction and co-ordination of "Look deep and strike deep" assets. The air coordination is already centralised at this level in the shape of the JOC (Joint Operation Centre). The battles of the subcontinent have shown a clear lack of a well chalked out campaign strategy (Bangladesh is the sole exception). Perhaps this is due to a confusion of scales between that of the "Operational Art" and national strategy.

Concept Based Requirement System. An adoption of the concept based requirement system is of the utmost importance for us today. It will, for a change, put an end to the war of nerves that plagues relations between our General Staffs and R&D establishments. R&D is frightfully expensive business. It can not be left to adhocism. Planning for the introduction of new weapon systems should not be confined merely to opening the glossy pages of the Inter National Defense Review and other technical magazines and asking our R&D to reproduce or copy the hardware advertised there. The technological "tail" can not be allowed to "wag" the dog. Our General Staffs will have to clearly visualise the future battle field and the projected abilities of our likely adversaries and work out the futuristic tactical concepts. All our R&D efforts must then be geared on to the realisation and translation of these concepts. Such a working methodology will put an end to the mutual bickerings and recriminations about constantly escalating GS QRs that one hears in our R&D corridors.

The Air Mechanised Aspect. Lastly, the technological aspect can not be underplayed. We are in the throes of a third revolution. We can not afford to lag behind in this electronic revolution. We must strive to catch up with the "Look deep and strike deep" capabilities, with the brilliant munitions and assault breakers for that ultimately is the core of the Airland doctrine. As some one said aptly "In the future battle field anything that moves will be detected. Anything that is detected will be destroyed".

CONCLUSION

The rate of change and obsolescence has become staggering in our times. Future shock is a very real phenomena. We can not afford to be shocked by the future. We have to keep pace with it. We can not afford to lag behind again either conceptually or technologically. A study of the Airland Battle 2000 doctrine therefore acquires greater pertinence today than even before. For the conceptual and technological advances of this doctrine are not just esoteric moonshine confined to the central European battle field. State of the art equipment is now available in the subcontinent. F16 and Mirage-2000 aircraft, cluster bombs and the spectre of Hawkeye" AEW (air borne early warning) systems are now an unpleasant reality that we cannot wish away. The weapons environment in which any future subcontinental war may be waged is going to be characterised by a very high degree of complexity and lethality. We must prepare today for that awesome tomorrow.

The Forgotten Jammu & Kashmir State Forces

BRIG N S RAWAT (RETD)

HITLER'S unexcelled propaganda Minister Goebbels believed implicitly on try, try again and yet again, said he, "If you keep throwing mud at a person, some will sooner or later stick". Similarly I keep on repeating that although themselves State Forces, the J&K were a race apart. That to be fair, their performances must be viewed in the correct perspective.

General Zorawar Singh, the outstanding Commander of Maharaja Gulab Singh's army was a legend amongst army leaders of his era. He led his army consisting of Dogras, Biharies, Gorkhas and Pathans on Kacha roads or tracks over frozen glaciers over 20,000 ft heights not once but several times and knocked at the gates of Lhasa, capital of Tibet. He had no proper communications, supplies, equipment or reinforcement facilities. His men carried on their backs all essential articles like ammunition, ata, and frying pans. Later on in 1947 Brigadier Rajindra Singh Dalpatia performed similar miracle. He had just taken over as Chief of the J & K Army staff from Maj. Genl. H. L. Scott, CB DSO, MC & Bar by volunteering to stop the mad onrush of tribal raiders, stiffened with Pak Army men, some three thousand strong in MT. The only troops available at that crucial moment were some 150 NCO's and men from different units attending local courses of instruction in Khundru, Kashmir, and he made a beeline for Domel on URI Srinagar highway with his spartans, much to the surprise of Brigadier Bogey Sen DSO. Rajendra Singh by superb rear guard actions succeeded in blunting and delaying the invading column for full three most critical days i.e. thereby enabling the IA units to land in Badgam air strip. Of course it costed him his very life, near Baramula. Thus was foiled the dream of Mohd Ali Jinnah of celebrating ID' in Gulab Mahal in Kashmir, and constructing Mashe Allah Mosque complex in Jammu. Another equally brave hero viz Major Some Nath

Sharma, with his Kumaoni company succeeded in saving Badgam air strip for the country. Without it the Saviours viz IA units would not have been able to land. He very rightly was awarded the first Indian VC for his outstanding bravery. May be Rajindra Singh's achievement and sacrifices were no less and perhaps he too should have been similarly honoured.

An idea was then mooted that Sheikh Abdullah, the sincerest well wisher of Kashmir, then at the height of his power, may condescend to let the prestigious hospital in Saura, his home village some ten miles from Srinagar, costing the Indian Exchequer several crores of rupees, to be named after these two brave saviours as 'SOM RAJINDRA' Hospital. May be the present rulers of Kashmir might consider the idea, for its worth.

Similar high dedication to service and bravery were exhibited by Lt. Col Sherjang Thapa MVC and Hira Nand Dubey VRC and several others of J&K State Forces, who fought with their backs to the wall to protect their hearths and homes. That a handful of some ten thousand J&K S.F., stretched out in penny packets all along the long border from Skarda to Punch, Kotli, Mirpur and Madhopur did it so extremely successfully till relieved by the mighty IA. some ten times stronger and far better served, equipped and provided, surely was no mean performance by the J&K S.F. that were and the J&K Regt. that now are.

Long live the J&K Forces.

Australia's Defence

A REVIEW ARTICLE

This book was published in 1980, but, by circumstance, was received for review in December 1985. Inevitably it does not cover events after 1979, thus five years of hindsight are fortuitously available to the reviewer. Firstly, post-1979 developments as to Anzus. Paul Wolfowitz, US assistant secretary of state for East Asian and Pacific Affairs has iterated that the framework of the Anzus pact *per se* would not be dismantled, if the New Zealand parliament passed by mid-1986 the bill banning nuclear-powered ships and nuclear weapons from New Zealand's ports. However, the USA would end its defence obligations to New Zealand. While New Zealand rightly establishes its own identity, what then is the subsisting position for Australia, in relation to the "indefinite" duration" Anzus treaty operative from April 1952, and then designed for Australia, New Zealand and the USA "to act to meet the common danger" in the event of attacks on either metropolitan or island territory of any one of them, or on their armed forces, vessels or aircraft in the Pacific? What also is the present Australian Labour Government's policy as distinct from that of Mr Malcolm Fraser's government reflected in this book?

Historically, so far only the British have successfully "invaded" Australia in 1788, the Japanese giving up their plan to do so in 1942, though they did, however, bomb Darwin. Apart from the existing Nuclear Disarmament party, there is as well now in Australia an anti-nuclear swell in Prime Minister, Mr Bob Hawke's Labour Party which he has assuaged for the present with some diminution of his position within his party. He had to climb down on his support for US nuclear tests in the Pacific, which his Foreign Minister, Mr Bill Hayden, opposed, and who, in turn, proposed a nuclear-free-zone in the South Pacific. Australia last year, however, agreed to allow US aircraft, monitoring test flights of MX missiles, to be stationed in Australia.

By Ross Babbage, University of Queensland Press, pp 312, price not stated.

There are currently three high-security US missile surveillance installations in Australia, jointly manned by the two countries. These installations thus, by circumstance, are possible targets in the event of a US-Soviet missile exchange. While Mr Hawke is not an automatic adherent of the US line as evidenced by his opposition to the Strategic Defence Initiative (Star Wars) and his differing views vis-a-vis the USA on Vietnam and Kampuchea, he is a supporter of Anzus. If, as seems probable, the USA terminates defence co-operation with New Zealand this year, in that event Australia and the USA are perforce reluctant to renegotiate a bilateral treaty in lieu of Anzus, as this would further provoke the anti-nuclear lobby in Australia. Possibly later in 1986, Australia and the USA would exchange letters that the Anzus treaty would continue to subsist, with New Zealand's participation in suspended animation, but in a position to resume if the anti-nuclear legislation is withdrawn by a future government.

In addition to Anzus, Australia is also involved in a 1971 Five Power-Defence-Agreement (FPDA) in Southeast Asia with Britain-New Zealand, Malaysia and Singapore, which arrangement was set up as a security umbrella to meet any threat to the region following the British withdrawal east of Suez. During Mr Hawke's visits to Singapore and Kuala Lumpur, the Asean concern about the Vietnamese presence in Kampuchea came up in the particular context of the Australian Mirage squadron at Fort Butterworth in Malaysia. Both Malaysia and Singapore, whose security interests are bolstered by the presence of the Australian squadron, were keen that it remains. Successive Australian administrations, and not only Mr Hawke's, had been keen to pull out from this military commitment. As early as 1973 Australia started reducing its troops, naval vessels and aircraft in the region. Most of the troops went back and did not return. Naval vessels presently only make periodic visits. As to the Mirage squadron, Mr Hawke had asserted that Australia was prepared to maintain some sort of presence at Butterworth, but insisted that the exact nature of this presence should be left to Australia.

Secondly, irrespective of Anzus, Australia has now independently upgraded its defence profile, in order to be self-reliant, for, as an Australian Defence Department spokesman has said in 1986, "The logistics of invading Australia are of course intimidating. But so they are of defending it. We have more than 17,600 miles of coastline, limited technical resources, and a small defence force". The biggest

current expenditure is on the replacement of the Mirage, 1110D by the F-A-18 Hornet, the most advanced and expensive corresponding American aircraft. The first two have been procured from the USA, while the remaining 73 are being assembled and/or manufactured in Austria. The next project is the construction of five submarines by a West German or Swedish firm. The third major project is for over-the horizon surveillance of the Northern coastline.

To conclude, while Dr Babbage correctly postulated in 1979, that the security problems confronting Australia in the 1980s will differ substantially from those in the past and that the era of forward defence is now over, it would appear that the present Australian government, possibly on the prompting of persons like Babbage, is already thinking on the lines suggested in this book, viz, Australia must now generate a capability to provide the main forces for her own defence a vastly different and more demanding task than that faced in the past. Finally, during his visits to Southeast Asian and Pacific countries, Mr Hawke has consistently asserted, to use his own words, "Australia's destiny is inevitably and irrevocably with the Asian and Pacific region" and not as "the last staging post of European civilization". Concomitantly, Mr Hawke's administration sees itself playing a more assertive role in the region. Though these events of 1981-86 are sub-sequent to the publication of this book, this does not detract from the unquestionable value of this work for those researching defence policy in general in the region, and Australian defence policy in particular.

SLM

Book Reviews

SENTINELS OF THE NORTH-EAST : THE ASSAM RIFLES

BY MAJ GEN D K PALIT

Published by Palit and Palit, New Delhi 1984 Pages 344 Price Rs. 150/-

THE history of the Assam Rifles being very closely connected with the extension of Indian political control over the eastern and the north-eastern border regions of the country, it should be of as much interest to any scholar of Indian history as it is to the members of the Force. Unfortunately not much has been written on the subject nor has much publicity ever been given to the activities of the Assam Rifles by the Government, with the result that little or nothing is known about them west of the Assam border. The publication of a comprehensive history of the Assam Rifles in the form of the *Sentinels of the North-East* with its prospects of wide national circulation is, therefore, timely and most welcome. For the purpose of review the book may be divided into two parts. The first part covering the period of 86 years from 1834, the origin of the Cachar Levy (the forerunners of the Assam Rifles) to 1920 and the second part dealing with the modern 50 years from 1921 to 1970.

The author admits that the first part of the book comprising the first four chapters, is nothing but a condensation of the *History of the Assam Rifles* (the correct title of the book) written by Colonel Shakespear. Those of us who have read Colonel Shakespear would agree that his work is most comprehensive leaving no scope for further research. The author could not, therefore, have done better than to base the history of the earlier years on this great work. There also cannot be two opinions about the requirement for condensation of the work before its inclusion in the Regimental history. For, the title of Colonel Shakespear's work notwithstanding, all that it contains is not regimental history. The requirement for cutting and pruning was certainly there but not, perhaps, to the extent carried out in the work under review. Under ordinary circumstances, what is to be included and what is not to be included in a book is the prerogative of the author. But this is not so in the case of writing of a regimental history. In a regimental history maximum details pertaining to the

regiment have to be included irrespective of whether they add up to the commercial value of the book or not. In the present context many important details pertaining to the changing British tribal policy as it affected the employment of the Cachar Levy and the Military Police; the magnitude of the tribal hostility faced; the unique characteristics of the Military Police sepoy that enabled him to survive in the jungles, and the peculiar role of the Force that combined firmness with fraternisation while dealing with the tribals; operations conducted by the Force independently and under the Army, casualties suffered and awards received; Army/Military Police relations etc. have been cut out. Details regarding strengths, organisations, deployment, pays and allowances, the cost effectiveness etc, which are essential ingredients of a regimental history, have also suffered drastic cuts. Even complimentary remarks by senior army commanders, of which the Assam Rifles could justifiably feel proud, have not found a place in the book. The Kuki rebellion is, perhaps, the best dealt with topic in this book and yet even this is not free from omissions of the nature discussed above. It has not for instance been highlighted that the characteristic platoon system of organisation of the Assam Rifles (that exists to this day) is the direct outcome of its employment in the Kuki rebellion. It was also during these operations that the idea of establishing concentration camps for affording protection to the loyal tribals was first put into practice. This point is significant in view of such arrangements being made by the Army in the Mizo hills, in the form of grouping of villages, during the counter insurgency operations of the sixties. It was also, perhaps, worthwhile mentioning that these operations, which were mainly an Assam Rifles' affair, ultimately turned out to be the largest series of military operations ever conducted in the tribal areas till then; eclipsing old expeditionary days of Generals Symonds and Tregear in the eighteen eighties, or say the Abor expedition of 1911-12, in casualties and arduousness of active service. General Sir H Keary's remarks on the performance of troops in the final despatch on the operations might have been reproduced to good effect. The four battalions of the Assam Rifles would also probably have found it more satisfying if the strength of the Force involved had been shown battalion wise. Finally, from the regimental history point of view, the presentation of a shield by the Burma Military Police to the Assam Rifles in commemoration of their combined operations together is not so small a matter as not to find mention in the narrative.

With many facts either omitted or short of details and interpretation, this portion of the history makes somewhat dull reading and

hardly gives the impression of Assam Rifles being what Verrier Elwin thought they were. The explanation put forward by the author in the preface that Shakespear's work has deliberately been divested of details so as to induce the future officer to study the original does not appear plausible. If that was the intention the author might have at least given the correct title of Shakespear's work and also the name of its publisher. In any case the book is long out of print and it is doubtful if the Assam Rifles have made arrangements for its reprint, to make it readily available to the readers of the *Sentinels of the North-East*. It is felt that with an additional allotment of ten to fifteen pages to this portion the need for the reader to delve into Shakespear's original work, other than for special reference purposes, would have been obviated.

A passing reference may be made here to the author's mix up of dates pertaining to the first Abor expedition. The Abors made their first major foray into the plains in 1858 and not 1848 as reproduced by the author and the expedition under Colonel Hanny that followed was mounted in 1859 and not 1868-69.

The second part dealing with the period of 50 years from 1921 to 1970 is on the whole well covered. Never-the less here too many details important from regimental history point of view, concerning punitive actions, aid to civil authority, posts, strengths, organisation etc, have been left out. In fact the author does not seem to follow any system regarding what details to include and what not to. Rani Gaidiliu (Gaidilinu in the book) for instance, has received a detailed coverage while Assam Rifles patrols that chased her and finally captured her have been dealt with in a very cursory manner. Even names of Jemadar Kaziman Chetri and Havildar Babua Lushai of the 3rd Battalion, each of whom was awarded the Indian Police Medal in this connection—the former for gallantry during the defence of the Hangrun post, and the latter for skillfully scaling the stockade at village Kenoma and opening the village gate stealthily from inside, which resulted in the village being taken by surprise and the Rani being captured have received no mention. Similarly while describing the work of the Assam Rifles escorts with the Survey of Indian party in 1935, a line about the award of the Indian Police Medal to Subedar Bal Bahadur Gurung of 3rd Assam Rifles for outstanding administrative work in this connection, should not have been considered out of place. No mention has also been made of the circumstances under which Jemadar Jairaj Rai and Havildar Budha Singh Lama were awarded the Indian Police Medal in 1938. Incidentally none of

the three recipients of the Indian Police Medal mentioned above have been included in the list of winners of awards at Appx B.

The role of the Assam Rifles in the Second World War has been dealt with in great length in four chapters taking up 65 pages—space equivalent to that allotted to the first 86 years of Assam Rifles history. While the author deserves the greatest credit for bringing to light many more facts about the Assam Rifles' involvement in the Second World War than were known to them before, this by itself does not justify his lengthy treatment of the topic. Most of the length is made up of long winded quotations from works of other writers on the subject and the thick introductory padding of general operational situation provided by the author to every little activity of the Assam Rifles. It is however surprising that though an effort has been made to deal with this topic in the greatest possible detail no mention has been made of the number of casualties suffered by the Assam Rifles during the fighting or as a result of disease. Brig Hugh Richards, the hero of the battle of Kohima is known to have made some flattering remarks about the performance of the 3rd Assam Rifles which could have been usefully reproduced. That the Assam Rifles sent a contingent to the victory parade in Delhi should not have been considered a matter too small to deserve mention.

Before Independence the Ex members of the Assam Valley Light Horse decided to present three of their shields to the Assam Rifles in token of mutual regard and close cooperation that always existed between the two regiments during the yester years. Consequently the Melitus shield was presented to the 1st Battalion, the Assam Battalion shield to the 2nd and the Curzon shield to the 5th Battalion. This fact might have been mentioned. The establishment of a TB hospital for the Assam Rifles at Shillong was an important welfare measure worthy of being taken note of.

Operation 'Mop' was launched with the recovery of arms and hostages captured by the hostiles during the Achingmori tragedy as one of its aims. Figures of such arms and hostages actually recovered as result of the Operation indicate the extent to which the Operation was successful and as such should have been given out.

In the story of the relief of Aizawl in 1966 there is no mention of the relief column comprising of three platoons of 18 Assam Rifles and a detachment of 3 in mortars of the 2/11 G R that managed to land at Aizawl in helicopters after the second air strike on the 6th of March.

The main relief column of 8 Sikh reached Aizawl only on the 7th, and the platoons of the 18 Assam Rifles played an important role in the defence of Aizawl till then. In fact it was the arrival of these reinforcements that induced the hostiles to upstick and run. It is interesting to note that this was the second time that the Assam Rifles had foiled a determined bid by the hostiles to capture Aizawl—the first one having been made in 1890. Unfortunately the book under review does not contain an account of the first attack, nor the interesting story behind the two naval guns that found their way to the Quarter Guard of the 1st Battalion at Aizawl.

This history of the Assam Rifles looks incomplete without an appendix listing the names of Commandants of Battalions. In fact it would have been ideal if names of Subedar Majors had also been listed. Appendix 'B' on honours and awards is glaringly incomplete. Besides the many award winners whose names have been missed out both from the text as well as the Appendix, there are some who though mentioned in the text have not been included in the Appendix. Lastly the reader is likely to miss the bibliography.

—K B S

THREATS, WEAPONS, AND FOREIGN POLICY

Edited By Pat McGowan and Charles W Kegley, Jr Vol 5

Sage Publications, Beverly Hills, London Ec1 YE, 1980, Pages 324;

THIS is an erudite and learned book consisting of articles on different aspects of the subject by various scholars.

A large portion of the book is filled in with incomprehensible statistical formulae, at least for the layman. Chapters 1, 4 and 6 are of interest and are readable.

The main problem with this type of book is that the statistics are not explained and neither are conclusions drawn from them. It would be necessary for the reader to draw these for himself after a careful examination, except in the case of the articles mentioned specifically. A book for academicians.

—SS

SMALL COUNTRIES, LARGE ISSUES ; STUDIES IN US—LATIN AMERICAN ASYMMETRIES

By Mark Falcoff

American Enterprise Institute for Public Research, Washington DC 20036, 1984; Pages 126, (AEI Studies 409)

THIS book is a study of what is known as US—Latin American asymmetries. This phrase aptly describes the purport of the book.

It elucidates the 'Big Brother—Small Brother' syndrome. This is a fact of life that all big nations have to face in relation to their smaller neighbours as India is also now beginning to find out.

Before delving into the study itself it is necessary to go into the history of the whole relationship.

The intense rivalry between the British and the Spanish did not thinw the defeat of the Spanish Armada but continued till the latter was overrun by France. This is a period of over 200 years. While the British were able to defend their own shores they were unable to prevent the Spanish spreading out into the Western Hemisphere. They nibbled here and there without success. The occupation of Spain by the French under Napoleon led to the erosion of the Empire that the former had set up in the Americas. This was of course aided and abetted by the British. They also saw to it that this Empire split up into many components. In this they were helped by the cupidity of local satraps whose ambitions could not see the advantage of unity. In the case of the Portuguese who were similarly affected the Emperor established himself in Brazil. The British alliance with Portugal enabled that country, that is Brazil, to aggrandise itself at the expense of the erstwhile Spanish territories. It will be seen therefore that the British impulse was to divide up Spanish America and then to economically exploit it. Central America is a case in point though all the region felt this to some degree. Central America was split up into many small states. This was to the advantage of the USA too who continued this policy. Some of these small countries still use US dollars as their local currency, for example Panama. And the US as they became a strong nation took on the British policy of opposition to Spain. At the same time they decried the establishment of European colonies in replacement of the Spanish in any part of the Americas. The Munroe Doctrine was based on this though even here there was partiality for Britain in that the latter was permitted to establish itself in the Honduras and in the Malvinas (now known as the Falklands). British influence and interference did not die out till the end of the Second World War when the USA took on their role.

The Book examines Cuba, Uruguay, El Salvador, Nicaragua and Chile.

The Cuban problem illustrates the difficulty of a large neighbour in trying to meet the aspirations of the smaller one. The Spanish were evicted from this country by the USA as late as 1901, which is nearly one hundred years after the other territories obtained their

freedom. Incorporation of this region in the USA was considered but not effected. The basic difficulty here is the desire of Cuba to deal with the USA on a level of parity. There is also the lurking ambition of Castro to speak for the whole of Latin America and indeed to try and dominate the whole region if it can. The use of Cuban troops in parts of Africa as Russian surrogates while helpful to the USSR also tends to project Cuba into international affairs as a country of some importance. In Central America at least this is accepted and the Leftists here look to Cuba for support. Things are complicated by the intrusion of the USSR into this region which is very close to the USA. Thus suspicions of Cuban intentions remains a barrier as it must do in the case of US aims in the region to Cuba as well.

The examination of Uruguay is related to a film produced by a Leftist European with the intention of demonstrating the degree of control that the USA applies in that country. The book tries to deny this allegation on the basis that the film though made in Chile relates to the kidnap of an US operative in Uruguay and his interrogation by the rebel movement there. This event actually occurred. Obviously the film highlights a point of view unpalatable to the USA. In the case of the Southern Cone of South America Cuba has less influence than the Leftists of Europe. The majority of the activists in the region have their sanctuaries in neighbouring countries or in Europe as opposed to the situation in Central America. The basic reason for this is the fact that the activists in South America spring out of the middle class with ties to their old countries in Europe. In Central America it is the peasantry that form the back bone of the various movements there. There is no peasantry in South America especially in the Southern Zone. It may be noted in passing that Uruguay was set up by the British as a buffer between Brazil and Argentina. It has actually been a part of the latter and was separated at the end of a War between the two contending states at the end of the last century. The fact that Argentina had to part with territory in spite of winning the war is the clout that the British wielded in aid of their ally Brazil. Relations with Argentina had been bad as a result of the repulse that the British had met with in their attempt to take Buenos Aires by force in the middle of the last century. Then the Argentines had abolished slavery as soon as they took control of their country from the Spanish. This adversely affected the fortunes of the British slave traders. Except when it comes to football Uruguay is close to Argentina. Lacking resources and much industry most of the middle class of that country work in Argentina where they do not need a work permit.

The book tries to Justify an official document which purports to show the degree of Cuban involvement in subversion in that country. The basic argument is directed at Americans who question the veracity of the document. The book is not very convincing. On the other hand there is little doubt that the ongoing subversion in El Salvador must be receiving foreign support without which they would find it hard to survive. The USSR is generally reluctant to involve itself directly in such support and thus it is possible that weapons and so on are being channeled through Cuba.

Nicaragua is another weak segment of the both in the sense that it tries to justify the selection of the Somoza family as the surrogate in that country. The USA had been extremely interested in Central America since the middle of the last century owing to their desire to construct a canal linking the Pacific and Atlantic Oceans. Nicaragua happened to be one of the countries selected. Intrusion into the local politics in the whole region lead to a US occupation in most of them. In Nicaragua the US Marines were located therein from 1912 to 1933. It is the big landowners in these small countries that have posed a problem for development or modernity. While repressing and suppressing the peasant they fight among themselves for power. It is in this power game that the US become puppets as they tend to support the family or person who pretends to be closer to them culturally and socially. The Somozas won on this score and retained power for nearly half a century till they were thrown out by a revolution.

Regrettably the section on Chile shows the American leadership at its worst. The book pretends to whitewash the CIA and the multinationals in their attempts to prevent Allende from becoming President. It then also attempts to deny that the US had a hand in the military coup which led to the death of Allende and the establishment of a military regime in Chile. At the same time there is President Nixon wanting to make the economy 'scream'. In this sense there seems to have been the application of the financial thumbscrew to make the situation in Chile worse in the economic field. While elements in Latin American countries have had reason to applaud this form of US intervention it alienates the USA from the people of the country.

The phobia of communism that reared its ugly head in the USA after the Second World War made them at times blind to the fact that many freedom movements or revolutions were due to the need for change and not necessarily communist. Social stagnation brought

about by the reluctance of dominant elites to share power resulted in a frustrated majority taking to violence as the only recourse. This aspect is not it appears understood by the power brokers in the USA. Then there is the misguided loyalty to those who have previously sided with the Americans. All this leads to a degree of unsophistication in the wielding of power by the USA. Patience and understanding are the main requirements of Big Brother. This is something that India too needs to learn. It must however be pointed out that there is no comparison between the two countries. The USA with its strong financial position has practised a form of economical colonialism in Latin America. This India in its present state cannot afford.

The US State Department employs many scholars in studies of this nature. So does the CIA. In matters of major policy it would appear that the decision makers in the country do not rely on advice given by such personnel. This particular study has obviously been made by a scholar at the behest of one of these departments as an apologia for US policy, in Latin America. —SS

“SIEGFRIED—THE NAZI’S LAST STAND”

BY CHARLES WHITING

Published by Leo Cooper in association with Secker and Warburg,
London 1983 pp 268 Price £ 8.95

FORTIFICATIONS have always played an important part in war. They are designed to defend an area or a location with the minimum force. This the Siegfried Line did fulfil in good measure. The British unofficially allocated this name to the defences which in German parlance were known as the ‘West Wall’.

The line was constructed to assure the defence of Germany from a threat from the West, that is by Britain and France. It was 400 miles long and extended from Switzerland to the Dutch frontier. These defences were completed in a period of 18 months as directed by Hitler and built by a special mobilisation of manpower and engineering skills. Unlike the Maginot Line constructed by the French it was not a thin line of fortresses but a zone some 3 miles in depth. On the average there were 35 bunkers to the mile. Each of these were to be manned by 14 men who actually lived under it. The bunkers were made of reinforced concrete with walls having a thickness of 9 feet. Limited arcs of fire were provided for but this deficiency was compensated by the siting of at least three other

bunkers to cover the approaches to it from unseen directions from within it. The only weak element was the entry door which could be broken into without much difficulty. Anti-tank obstacles were constructed as a part of the defences and provision made for anti-personnel minefields. In this way they were a powerful deterrent to hostile offensive action

Hitler's strategic thinking was always oriented towards the East, that is Poland and Russia. It was here that he wished to acquire territory for expansion and enrichment of the German race. Thus the West Wall was initially built simply to discourage the British and the French from interfering with these plans. Once he had aroused both of them by his invasion of Poland and because of the opportunistic alliance with Russia he was forced to deal with them immediately after he had occupied Poland. Thus he swung over to the West where the Siegfried Line had done its task effectively by denying any advance by British and French forces. Using the fortifications as a firm base he debouched into the Netherlands and France defeating the Allies in a short space of time. Then like a pendulum he returned to the East and attacked Russia. Unfortunately for him and for Germany he did not construct a similar wall to the East. Full of overconfidence he assaulted a potentially stronger enemy who though faced with many defeats in the early days returned to the attack and finally occupied the area in Germany allocated to it. The author like most British writers and strategists flays US policy to break into Germany on a wide front. He considers that the best method was the one suggested by Montgomery, to concentrate along the coast and debouch onto the northern plains of Germany. This would have forestalled the Russians. The fact is that there was an agreement to divide Germany. The decisions for this were taken as early as 1944. The only purpose of forestalling the Russians would have been to break the agreement. If this were so there seems to have been no reason to arrive at any division of Germany at all. Then there would have been some confusion with each of the anti-German forces grabbing whatever they could. In fact by giving the Russians a sector in Germany the policy makers in the UK and the USA sold Poland to the USSR. The Soviets could not occupy their sector without occupying territory contiguous to it. Even from the tactical point of view Operation Market Garden, the attempt to secure Arnhem failed mainly because of German interference to the Eastern flank of the advance. A single advance on the lines suggested would have come in for concentrated counter thrusts in a similar fashion. Did not the wide front policy cater for this? And did not the US advance into Czecho-

slovakia and Austria at least save the latter from permanent Soviet occupation?

The West Wall played a major part in giving the Germans time to re-organise their forces routed in Normandy. Initially it was manned by older soldiers and boys. The two or three weeks respite that was granted to the Germans by the Allies, having over-stretched their maintenance communications, was enough for them to put the Line in effective operation. Then for nearly six months the Western Allies were unable to break through it. It once again formed the base for the German Christmas offensive towards Antwerp and once again a barrier to Allied advance.

The author describes the way of modern non-nuclear siege warfare. This he does very effectively by giving accounts of units and formation battles.

The actions in the Huertgen Forest are described where US Forces suffered heavily by attacking in an area where superiority in air and armour could not make itself felt. This was compounded by obstinacy in persisting in the attacks when the region could quite easily have been surrounded and cut off. The prestige factor which resulted in unnecessary casualties of no small significance is a ego hangup of many commanders. Poor sub unit and unit administration in the US Army brought about an equal number of frost bite casualties as from the battle itself. The gung-ho spirit and the attitude of self help may be laudable objectives but attention to small details at unit level would mitigate hardships that the ordinary soldier has to face in addition to bullets, especially in very cold weather. Even in warmer climes the soldier has to be encouraged to keep himself clean; he must be provided a hot meal every 24 hours; he should have the makings of tea or coffee for a brew up; and in cold weather there is the need for clean and dry footwear to forestall frost bite. On this point the British are streets ahead of the Americans.

The effectiveness of highly motivated and trained troops is shown by the actions of a US Ranger battalion which attained its objectives speedily and with few casualties. British commandos operated successfully in France and Germany with much greater effect than other infantry battalions. They did the same in the Falklands in the 80s. The Germans had their elite panzer groups and the Russians their Guards divisions. Such elite troops have always existed. In short high intensity wars the results achieved by them are out of all proportion to their numbers. May be this is the future trend.

It must also be noted that fortifications need to be constructed in depth so that they effectively delay and disrupt an attacker. One can observe how quickly the Israeli Bar Lev line was overcome by the Egyptians since it was a linear stringing together of strong points without any depth. The major problem is one of money since fortifications are expensive to construct. Even the richest nations find it difficult to provide for defence against nuclear fallout to protect its citizens from this scourge. Fortifications in this context would be pointless if at the end of a nuclear exchange they are still unbreached but the population they were supposed to defend has been decimated.

An interesting and well written book.

S S

A MOUNTAIN IN TIBET : THE SEARCH FOR MOUNT KAILAS AND THE SOURCES OF THE GREAT RIVERS OF ASIA

BY CHARLES ALLEN

Futura Publications, 74 Worship Street, London EC 22EN Price £ 3 95

CHARLES Allen author of "Plain Tales From The Raj" has produced this excellent book which deals with "the search for Mount Kailas and the Sources of the Great Rivers of India".

The author has the right background to have undertaken this work being the great-grandson of Colonel St G. C. Gore, Surveyor General of India from 1899 to 1904, and later having met Professor (and Colonel) Kenneth Mason of the Survey of India, "probably the last of the players of the Great Game," and well known for his book "Abode of Snow". Among the sources Allen has consulted are those prodigious works of scholarship, Sven Hedin's *Southern Tibet* (Vols I-III) and Colonel R. H. Phillimore's *Records of the Survey of India* (Vols I-IV). These were more or less the author's constant companions during the four years that he took to produce this book.

The Prologue starts :—

"On 26 November 1952 Sven Anders Hedin died in Stockholm. Once honoured as the man who had done more, single-handed, than any other to colour the blank spaces of the map of the world, the eighty-seven-year-old Swedish explorer ended his days friendless and neglected. Among the newspapers that noted his death was *The Times*. It recalled how Dr. Hedin had supported Kaiser Wilhelm II in the First World War and Adolf Hitler in the

Second (despite being, as the writer put it, 'one-sixteenth non-Aryan'). As to his each achievements, it recalled that Hedin was apt to dismiss the geographical fruits of all discoveries other than his own."

But the obituary published by the Royal Geographical Society in the *Journal* three months later was really severe, considering that the Society had awarded the explorer its Founder's Medal in 1898 and its Victoria Medal in 1903. Sir Clement Skrine, then a Member of Council of the RGS, wrote :—

"Dr. Sven Hedin was a bold and ambitious explorer. Once he had made up his mind to attain a particular object, no consideration of other people's feelings, convenience or even safety was ever allowed to deflect him. In his own words, the adventure and the 'conquest' of an unknown country, and the struggle against the impossible, all had a fascination which drew him with an irresistible force. But to him exploration in the field was only half the battle; its results had to be recorded for all time to the glory of Sweden and Dr Sven Hedin. By temperament Hedin was a Nazi, to whom exploration was a *Kampf*, a struggle not only against the forces of nature but also on paper, against rival explorers. It is not surprising that he expounded in turn the causes of Kaiser Wilhelm II and Adolf Hitler".

After the prologue, chapter follows chapter so smoothly that one can hardly put the book down.

In the first chapter is a description, difficult to better, of the holy mountain'. A pilgrim would see as he came near it

"a pyramid of rock and snow, towering above the surrounding mountains, as the Tibetans say, 'like the handle of a mill stone'. This is Mount Kailas. Deep clefts on either side isolate it from the rest of the Kailas range, which makes it especially well-suited to the act of devotional circumambulation, known as the *parikrama*, practised by Hindus and Buddhists...It has four clearly-defined walls that match the points of a compass, and on its southern face a deep gully runs down from the summit, cutting across an equally distinctive rock band of horizontal strata. This is the mark that has earned Kailas the title of 'swastika mountain', and it is this southern face, emblazoned with its talisman of spiritual strength, the *swastika*, that the pilgrim first sees as he climbs out of India..."

With all the material at his command and the Survey of India opening up its doors to him and showing him diaries tucked away in its archives, the author has put together this work the holy mountain and the sources of the great rivers—Ganga, Brahmaputra (Tsangpo), Indus and Sutlej—authoritatively and interestingly. He has given due credit to the Pundits of the Survey of India; they went where “no Mogul Hindustani, Pathan or Feringhi” was allowed to enter. They were trained in “all the necessary skills”. They learnt to measure distances by pacing, being drilled by a sergeant-major with his space stick to take regular spaces of $31\frac{1}{2}$ inches each—2000 to the mile. They carried a Survey of India rosary of 100 beads instead of the Hindu or Buddhist one of 108.

Little known facts emerge. For example how did the ‘pundits’ get into the Survey of India and who would take the credit for this experiment? The answer can be found in the chapter, “The Queerest, Coolest Fish at Rugby”: Edmund Smyth and the Pundits.” Similarly, Sven Hedin’s claim that he discovered the source of the Brahmaputra has been convincingly debunked; but you must read the book to find out the truth. No one, of course, can take away Sven Hedin’s greatness as an explorer, ‘Conqueror and Nazi’ though he may have been!

The aim of all these famous and not so famous men was to fill up the “white patches” on the maps concerned as accurately as possible, allowing for the state of knowledge available at the time.

The author has made some slips regarding relationships. In the preface, Colonel Ranjit Singh Rawat has been referred to as the grandson of Nain Singh, whereas he is Kishen Singh’s grandson. Indra Singh Rawat is mentioned as a descendant of Kishen Singh which is not so. In Rawat’s own words, “Our root is Hiroo Dham Singh and we are all descended from him...we used to call Nain Singh and Kishen Singh ‘Boobhoo’...which in English would be the equivalent of granduncle”. At most one can say that Indra Singh Rawat is a relative of Kishen Singh.

Despite these discrepancies, the author has produced an excellent book about the ‘holy mountain’ and the ‘sources of the four mighty rivers: the sacred Ganges, the Indus, the Sutlej and Tsangpo-Brahmaputra’; it would be given pride of place by libraries and individuals in their collection of books concerning the Himalayas and Trans Himalaya.

J.A.F.D.

Additions to the U.S.I. Library for the Quarter Ending Sep 1986

AUTHOR	300—399—SOCIAL SCIENCES
1. Ezell Edward- Clinton Ezed	The AK 47 Story; Evolution of the 1986 Kalashni Kou. America, Stackpole Books.
2. Kruzel Joseph, and Hudson George	American Defense Annual. Lexington 1986 books, D.C. Health and Co, Lexi- ngton.
3. Geissler, Erhard <i>ed.</i>	Biological and Toxin Weapons today. 1986 Stockholm International Peace Rese- arch Institute.
4. Dharm, Pal	The beautiful tree; New Delhi Biblia 1983 Impex Pvt. Ltd.
5. Robinson, Julian Perry	Chemical and Biological Warfare Deve- 1985 lopment, Stockholm, International Peace Research Institute.
6. Phadnis, Urmila and other <i>ed.</i>	Domestic Conflicts in South Asia. 1986 New Delhi, South Asian Pub.
7. Sirodhi, B.S. (Lt Col)	Financial Management Service Officers 1986 (Saving Income-tax) Profitable Invest- ments. Incorporating Amendments up- to finance Act, Third Revised edition, July. Centaur Taxations and Investment Consultancy Service, 271/2, The Mall, Meerut Cantt.
8. Arbatov, Georgi, A & Willem Oltmans	Cold War or Detente? The Soviet 1983 View point. London, Zed books Ltd.
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10. Lal, Ela	My Years with the IAF; Air Chief 1986 Marshal P.C. Lal. New Delhi, Lancer International.

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12. Satinder Singh A Strategy for Indian Defense, New 1986
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20. Johnson, R.W. Shoot down : The Verdict on KAL 007. 1986
London, Chatto and Windris.
21. Baxter, Craig Zia's Pakistan ; Politics and Stability 1985
in a Front line state. America, West
view Press.

Secretary's Notes

ANNUAL SUBSCRIPTION

I would like to thank all those members who paid their subscription so promptly at the beginning of the year. To those of you who have not yet paid may I remind you that your subscription was due on the 1st January. Would you please, therefore, put a cheque in the post to me today. There are some members who have also to pay their subscription for 1985 and 1986. They are requested to make the payment for these years to avoid unnecessary reminders. Effective from 1 Jan 1971, the annual subscription has been raised from Rs 15 to Rs.20 and from 1 Jan 1987 from Rs 20 to Rs 30.

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SUGGESTIONS FOR THE JOURNAL

The USI Journal is in its 114th year of publication. As you will, no doubt appreciate, the Institution spends a great deal of its funds on producing this publication, we would like to have your comments, criticism and suggestions so that we may improve this publication to meet your requirement.

U S I

(Estd. 1870)

OUR ACTIVITIES

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For further particulars, write to Secretary, USI, Kashmir House, Rajaji Marg, New Delhi-110011.

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