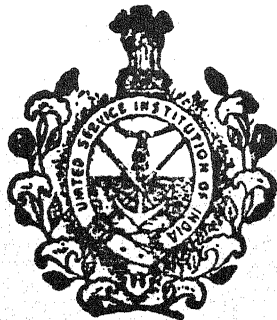


# U.S.I. JOURNAL

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(Established 1870)



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Whither Our Armament Industry?	—Colonel S Talwar
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OCT - DEC 1983

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# India's Security Environment

## Part 1—External Threats

BRIGADIER Y A MANDE

### INTRODUCTION

THE present world environment is far from satisfactory. The fresh arms race, atrocities in South Africa, internal problems in Sudan, fighting in Lebanon, Iran-Iraq war, political unrest in Pakistan, Bangladesh and Sri Lanka, interventions in Afghanistan, Kampuchea and Grenada do not augur well for the future. Equally, we cannot say that all is well within India. Both external threats and internal problems merit scrutiny. Since the Subject is vast, it will be covered in two separate articles dealing with external and internal threats.

Let us begin with role of superpowers and thereafter we will examine neighbouring countries which are of concern to us.

#### UNITED STATES

It is strange, but true, that relations between US and India are not as friendly as they ought to be. One wonders what prevents the two democracies to come closer. Evidently, the perceptions are different and policies pull apart.

As a superpower, in its global strategy, the US will support China as long as Sino-Soviet relations are strained and there is a possibility of armed conflict between the two communist giants. After the fall of Shah of Iran, Pakistan has become a front line state to US for restoration of any adverse situation in the Gulf and Middle East. Soviet presence in Afghanistan has made the situation worse. US will continue to arm Pakistan and retain its hold on that country.

US proclaims that its support to China and Pakistan is not anti-India. There is no doubt that America is not anti India and would like to preserve her neutrality. But a superpower has to play its own game and make choices which may not appeal to others. India, however, views the situation differently. To her, Pakistan and China are threats—a fact which she cannot ignore. It is understandable that

people of US will not accept Chinese or Pakistani aggression on India. If and when such aggression takes place, the US will take every possible step to ban supply of arms, halt aggression and bring about cease-fire. But what obviously US cannot help is commencement of hostilities.

A role which US has played for Egypt is not applicable to India. US gave Sinai back to Egypt. It would be impossible for US to ask China and Pakistan to vacate aggression from Kashmir and Ladakh.

In view of foregoing and from security point of view alone, India has a genuine grudge against US, and this is despite mutual appreciation of democracy and excellent people to people relationship. It is unfortunate that the interests of the two countries do not converge and a certain amount of apathy is inevitable. This does not mean that US and India will become unfriendly to the extent of severing all relationship but they will have to live with the realities of the situation.

Besides national security, the US and India do not see eye to eye with each other on other important aspects such as global economic situation and the arms race. The present economic practices of developed countries have adversely affected the entire developing world. It is difficult to subscribe to the theory that if developed countries put their houses in order, the developing countries will get automatic benefit of trickle down effect. What developing countries need immediately to tide over their economic problems are soft loans and market, and these are precisely the things which are being denied to them by the developed world. To make matters worse, the developing countries are spending enormous amount of money on arms race which could well have been spent on uplift of mankind.

It is often alleged that Indian media is most vocal and vociferous in criticising America, but when it comes to Soviet Union, they adopt a very cautious approach. Freedom of expression exists in India as in America. But, there is a difference in acceptance of criticism emanating from own media and the foreign countries. It should be remembered that India is an important country in the Third World and presently leadership has been thrust on her. India possibly cannot remain silent on many global issues which are adversely affecting the larger part of humanity.

US-Indo relationship has run a chequered course. Prior to Independence, India had acquired inspiration from America on vital issues such as liberty, freedom and human rights. India had looked towards US for maximum help, but then the problems crept up one

by one. US could not contribute towards public sector which was inescapable in the Indian view. When India recognised China and sponsored its case for membership of UN, the US felt otherwise. When US followed the policy of pacts and containing communism by the formation of ring round Russia, we were indifferent. In 1962, US and the West came openheartedly to our help, but later as Sino-Indian relationship deteriorated, US started a new relationship with communist China which was a surprise to most Indians, at least at that point of time, now accepted as part of her global strategy. And now US, a believer in free trade, always opposing protectionism, has started pursuing protectionism regardless.

Does this imply that Indo-US relationship is perpetually doomed to opposite views ? Not necessarily. In the dynamics of international relationships, policies of countries change with situation and national interests. It is in this context that people to people relationship of America and India assumes importance. America is the first choice of Indian students. Indians in America are doing well and are well accepted. America offers maximum scope for trade as far as private enterprise is concerned. Life style relating to freedom of movement, speech and expression is very much alike in India and America. There is every indication that inspite of government to government differences, the people of US and India will come closer due to increasing social exchange.

#### SOVIET UNION

The Soviet Union has come from behind and today there is little doubt that Indo-Soviet friendship has become steady. Outside the Warsaw pact countries, India is the only important country which is close to Soviet Union. Prior to Independence, there was little contact with Soviet Union and there were many who were sceptical about relations with a communist country.

Soviet Union because of their system of government had no difficulty in assisting our public sector. She has been firm on the Kashmir issue and has come to India's aid in all spheres, of which defence equipment is of special significance. The hall-mark of Indo-Soviet relationship was reached with the signing of Treaty of Peace and Friendship.

The most important events, in the recent time, which have affected our security environments are interventions in Afghanistan and massive aid to Vietnam. India's economic support to Vietnam and recognition of Kampuchea has led to speculations. Outside powers debate—what exactly is the nature of relationship between India and the Soviet

Union ? Is it merely confined to peace and friendship ? Or, is it a frame on which military alliance can be built at a future date ?

It is important to understand India's attitude towards communism. Our founding fathers believed in neutrality and friendship with all countries. India has never suffered from communist phobia like America and many other countries. In an open society like ours, the communist party is free to carry out its campaign. Our leaders believed that Indian society can never be overwhelmed by external influence, and the events have proved that our friendship with Soviet Union or the past enthusiasm with China has had no impact on our society. India is economically poor but not in values and culture. Those, who jump to conclusion that because India is poor, she is susceptible to communism make a fundamental mistake in assessing our society. Our society is more akin to West and has no semblance with communist societies. India has no objection if communism is acceptable to people but she is opposed to external imposition. And hence, India is of the view that foreign troops should withdraw from Afghanistan. This however, does not explain our recognition of Kampuchea, a subject to which we shall turn later.

Those who foster military relationship between US, China and Pakistan will obviously think in terms of Soviet Union, India and Vietnam. The reasons are far too obvious and hardly need any explanation. Let us accept the fact that national security is an important factor which governs relationship between the countries. It must also be understood that Indo-Soviet relationship particularly in defence matters is going to grow correspondingly with US aid to China and Pakistan. But, what is significant is that India is not a communist country. There are no joint training exercises, military plans, common doctrines or exchange of military advisory teams between Soviet Union and India. India desires to maintain her independent posture.

#### PAKISTAN

Pakistan has attacked India four times and the fifth one is not unlikely. The massive US aid to Pakistan has given her a capability for the next round. One understands US view that these arms are not for use against India but our experience tells us otherwise. Once the arms are given, US cannot exercise control on their use, she can only control resupply. This does imply indirect control by America, but by that time the damage would have been done and hence India has to be on guard.

It is often stated that what can a small country like Pakistan do to India ? Two points need to be kept in view ; firstly, along its

frontier Pakistan enjoys parity and an edge in the quality of weapons and secondly, Indo-Pak conflict is not a bilateral matter left to two sides. The road link between China and Pakistan has only military significance, it is of no use for developmental traffic. Also, why has Pakistan given a part of Kashmir as free gift to China? Surely, there must be a reason. It is also known that China is assisting Pakistan in her nuclear programme. It is in this context that US aid to Pakistan makes our security environment grave. Pakistan evidently has achieved its aim, even if China does not join her openly in the war, she will tie down larger part of our forces on border security. These aspects make Pakistani threat an all time reality.

Presently, Pakistan is facing some serious problems. She has to look after a very large number of Afghan refugees and the internal situation is none too happy due to Movement for Restoration of Democracy. She does not want two fronts: while her attention is focussed on the Western front, she would like her Eastern boundary with India to be quiet. According to Lt Gen Al Akram, Shivaji at the back perturbs her. To us, it appears absurd that India will ever attack Pakistan as stable Pakistan is in her interest; but then, Pakistan is entitled to her views. The recent friendly overtures by Pakistan, welcome as they are, must be viewed with caution.

#### CHINA

China must and does remain an important factor in our security consideration. Some contend that India never had a friendly relationship with China and it is futile to make too much of few trans-Himalayan contact. We have yet to understand China. Indians feel cheated and let down by Chinese actions but so do the people of Soviet Union and Vietnam. In the present situation, US appears to be the gainer. However, the US and Western hope that China will open its market for their manufactured goods may turn out to be a case of mistaken enthusiasm. China indeed occupies a very important position in the global and regional strategy. She can tilt the power on either side and therefore US will continue to woo China.

Historically, Chinese people inherit an ancient civilization with many achievements. They felt that they occupied centre of our planet and are a superior race. Such feelings may not hold good in the present days but nevertheless, they are proud, haughty, and very conscious of racial identity. One understands that immediately after liberation, emotions are strong and optimism high to reach old glory as soon as possible. After her liberation, the very first problem to which she attached maximum significance was restoration of the

boundary of the old empire. We made a free gift of Tibet to her and once she got Tibet, she needed road and hence the blatant occupation of Aksai Chin. Because of her experience of armed liberation, China has never hesitated in the use of force, but the force was not to succeed when it came to Soviet Union, US aided Taiwan and Mongolia. China blundered into thinking that national boundaries are solely governed by considerations of history and racial identity. In the restoration of boundary game, India has been the sole loser.

Bertrand Russell had cautioned the West that China and India are two ancient civilisations and they must be careful in their estimation. Sciences, Mathematics, Arts and Philosophies are not unknown to these countries and they will progress given the right conditions. China and India are alike in many respects such as large population, size, natural resources etc., but these are the apparent similarities and there they end. The people and culture are entirely different and so are their ways. In the case of India, her foreign and domestic policies have been very stable ; one can easily predict Indian attitude towards future events. India has followed a planned course of economic development and she accepts the fact that development takes time, it is futile to be over ambitious. India is a continuity. On the other hand, China has never had a stable domestic or foreign policy. Her ambitions are stretched to the point of absurdity. Her developmental activities have been executed by means of erratic movements such as Great Leap, Hundred Flowers, Cultural Revolution and the current Four Modernisations. China was a country which advocated population increase (more the merrier and mighty), but today she propounds ruthless norm of one child per family. In her external relations, she has alternately been friend and foe with India, Soviet Union, US and the West, and Vietnam. India is steady ; China is ever changing and unpredictable.

The Chinese nature and behaviour is puzzling. It will be recalled that Chinese contingent which came to India during Asiad were noted for warmth and friendship, but suddenly they created a scene because of dance sequel from Arunachal. Now it is known to everyone that Arunachal has been and is part of India and surely the Chinese also know that. Sudden outbursts and emotionalism is in the very nature of Chinese people ; they even decided to teach a lesson to Vietnam with whom they have much in common. Arrogance, egoism, violence and militarism are a part of Chinese nature. Toynbee asserts that history gives us insight into the character traits of the people. In evaluating chinese future course, one must take into account character



traits of her people, the political system which permits few people at the helm of affairs to impose their will and the role of PLA.

As the things stand today, Sino-Soviet rift governs external policies of China. It suits US and China also to counter Soviet presence in Vietnam and the sea. Presumably US hopes that as long as China is occupied with anti Soviet posture, her interests in Taiwan and South Korea are safe. Equally, it will dissuade China from any designs in South East Asia. China is keen to improve her relationship with India and reach an agreement on the fundamental issue of international border. In the internal policies, China is engaged in pushing Four Modernisations. The modernisation relating to farm output may backlash; it certainly has improved agricultural productivity due to incentives to the farmers but at the same time it is against communist doctrine and likelihood of clash with PLA cannot be ruled out. So far so good, but as we have noted earlier, Chinese are unpredictable and their future course remains an enigma. China is not going to fight with Soviet Union for the same reasons as the super-powers, will not involve themselves in mutual annihilation. Surely, no one invites disaster. Where then lies the Chinese threat? Very possibly in South East Asia as we shall examine later.

China and India are the two major powers in the region. There are many who feel that China and India can never become friendly as they are contenders for power, there are others who consider that China and India may cooperate for mutual benefit. In either case parity in power is essential for peace in this region.

Peace is outcome of balance of power. There is balance of power between the two superpowers and NATO and Warsaw, and hence no war amongst them. China has become a nuclear power, she has upset the balance of power in our region and this has to be viewed with concern. The present peace overtures by China are fine but one has also to take into account military build up in Tibet, the network of road communications, construction of railway lines, airfields and pipelines for petroleum products. China may advise our neighbours to patch up differences but the high way to Pakistan from Tibet exists and the Siliguri corridor is ever vulnerable. Pragmatism demands that India maintains parity with China.

#### OUR NEIGHBOURS

None of our neighbours other than Pakistan has a capability to cause us any anxiety. On the other hand, the very size of our country, its military potential and development causes anxiety to them. The

problems of all small countries are similar, they want to retain their national identity, funds for development and guarantee for their security. India never had objections for their sovereignty and national identity. She helps them with developmental aid but then, her own resources are limited. Hence, there should be no objection if these countries get aid from others provided the aid does not have hostile content towards India. It is vital that India should guarantee their neutrality but then her capability was shattered in 1962 and she has yet to restore the confidence. It is true that our relationship with the neighbours are not as good as they should be, but then, what can be done when the neighbours themselves face internal problems as in Bangladesh and Sri Lanka. It is obvious that internal problems encroach on external relationship. A powerful, non-aligned, non-interfering and friendly India would serve the interest of our neighbours best. Now there are obvious difficulties in the attainment of national power, but that must be our goal.

#### SOUTH EAST ASIA

While the world's eyes are focussed on the Middle East and East Asia, it is the contention of this article that the situation in South East Asia is none-too-happy. It has all the portents to flare up in the coming decade.

Burma faces the problems of communist insurgency in its Northern hilly region contiguous to China. Burma is likely to continue its aloofish attitude as long as China does not get involved in the insurgency.

The pro-US members of Asian particularly Thailand, Malaysia and Indonesia consider communism as threat. These countries do not distinguish between Chinese or Russian brand of communism, but apparently they are more concerned with Chinese communism because of proximity. Also, they are not very easy in their relationship with pro-soviet Vietnam and Vietnamese incursion in Kampuchea has heightened their suspicion. To them, it does not matter that Vietnam is anti-China. India's recognition of Kampuchea has caused irritation to these countries. They do not agree with Indian view that the present regime in Kampuchea is de facto and far better than Pol Pot. On the whole, their fears are genuine in that communism is next door, both of Chinese and Vietnamese model.

The existing peace in this region rests on flimsy foundations. Here, we have the presence of Soviet Union, US and China. These countries command sea route which is of global strategic significance.

The rivalry of Indian ocean extends as much to the East as West. Peace in this region can only be assured provided the two superpowers agree on status quo. But, the super powers play their own game. There is no reason why they should not enlarge their areas of influence and undermine each other. It is in this context that China factor assumes importance. If China intervenes, India cannot be silent because her own interests are deeply involved. The Chinese presence in Burma or South East Asia will make Indian security environment worse.

#### IMPACT ON INDIA

We are now in a position to examine impact of external, environment on India and her possible reactions. Opinions vary: there are those who feel that external environment is favourable to India, and hence she should devote her attention on economic development and cut her defence expenditure. An economically powerful India, free from poverty, is her real strength. Their arguments are: China is engaged in modernisation and has no expansionists design: Pakistan is involved in Afghanistan problem and has commitments in the Middle East: the super powers are engrossed in arms race: there is a crisis in Middle East and West Asia and there is enough trouble in the world to open another front in South Asia.

But others interpret the same situation in a very different manner. It is true that since the Second World War, the armed conflicts have been restricted and escalations checked. However, it is nowhere laid down that on our planet only one war will be fought at a time. Simultaneous eruptions can take place which will make the task of peace makers difficult. When the general environment is foul, the adventurists are encouraged to take risks. It will be recalled that Chinese aggression was well timed with Cuban crisis.

The existing environment in the littoral states is full of tension. There is a trouble in South Africa, Sudan is open for North-South conflict, Lebanon is hot, Iran-Iraq war continues, Pakistan is involved as front line state and South Asia and South East Asia are not free of problems. As it is, we are involved in the West and North and now the ocean has become alive. Such a situation calls for fresh analysis of national security.

#### THE NUCLEAR OPTION

Let us take the old question first, should India go nuclear? Earlier we had noted that China has disturbed balance of power in our region because of nuclear weapons. Surely, these nuclear

weapons cannot be used against Soviet Union or United States ! The five countries who have nuclear weapons cannot use them against each other because that will be the end. The nuclear weapons have use only against non-nuclear developing countries and therefore, Chinese nuclear weapons have direct bearing on our security and the neighbouring countries. Looked from this angle, India should go nuclear but, there are other important considerations. There is an obvious economic consideration but it is not so important, for if a country wants to go nuclear she will find the resources. Perhaps, the more important consideration is futility of nuclear weapons since they cannot be used in the normal course. It is a power symbol, a luxury which developing countries should not indulge in. India's policy is not to develop and possess nuclear weapons despite the know-how and capability. Many countries harbour doubt on our policy; they are welcome. The fact is that in an open society like ours, nuclear weapons development programme cannot be kept hidden. India's policy for not going in for nuclear weapons is acceptable to superpowers. Since, superpowers are interested in our neutrality, it may be presumed that they will take suitable action to counter Chinese nuclear threat.

But, what happens when Pakistan goes nuclear ?, and it is this threat which opens the otherwise closed chapter. There are indications that Pakistan is feverishly trying to produce nuclear weapons. Pakistan's nuclear programme has an Islamic tone and one has only to see BBC's film on Islamic Bomb to fortify the views. Pakistan is very likely to pass know-how or weapons to other countries. Also, one can be very certain that Pakistan will use nuclear weapons against India for the simple reason that with conventional weapons she can never force any decision on India. Therefore, the possession of nuclear weapons by Pakistan is a genuine threat and one has only to await the reaction of Indian people. The only hopeful sign is that possession of nuclear weapons will not be acceptable to superpowers. Mr. Barnes, in his recent statement, has stated that if Pakistan goes nuclear, US will stop all aid to Pakistan. One does not know how much heed Pakistan will pay to such threats. There is an interest of oil rich donors who can always substitute the lost aid. Besides, China may welcome Pakistan going nuclear. One can safely conclude that development of nuclear weapons by Pakistan will have serious repercussions on India and we have to watch out with great concern.

#### NEUTRALITY

Neutrality is one of the cherished desires of Indian people. Neutrality does not mean isolationism or aloofness. India desires

independence in view and is very much interested in the uplift of humanity. Equi-distance is a wrong word if it connotes ideas such as India should buy a squadron of fighter aircrafts from each of the developed countries. Neutrality means that India wishes to be friendly with all countries and cooperate for peace and progress irrespective of differences in cultures and ideology. Now, it is not possible to be equally friendly with all the countries as the world is divided in blocs and their interests vary; what can be done if friendship with one country is looked upon as unfriendly act by others? Besides, national interest cannot be overlooked. If India's friendship with Soviet Union is looked upon as possible threat by China and Pakistan in their ambitious designs, there is nothing wrong with it. Nor should US feel unnecessarily sore about our friendship with Soviet Union. We have a common interest with US in that supposing China encroaches into Burma or South East Asia, it will affect both US and India. Ideally, South East Asian countries should be strong enough to look after their own security, but that is not the case. Vietnam alone has shown capability to challenge China, but then Vietnam is a small country, economically not very sound. Vietnam capability to check China outside her own territory is most doubtful. Now that the days of pacts and alliances are over, there is greater need of understanding for the maintenance of balance of power by the countries of the world.

#### STABILITY

Besides neutrality, in the changing world of loyalties, Indian stability is equally important. Amongst the littoral, India is by far the most stable country. She has followed a very consistent foreign, economic and social policies. Democracy has taken a very firm root in India and it is noteworthy that India has had long spells under two prime ministers of which one is still continuing. There is no likelihood of any change on crunch issues. Stability is very important for foreign investment. It was heartening to hear a British tea investor; he wished that he had invested his entire capital in India because return is assured. Admittedly India does not offer lucrative returns and we are known for proceduralism, delay and red tape but over the period of time these too have become stable. Stability has important internal connotation and will be analysed in detail in separate paper. What makes India peculiar, different from others, is her neutrality, stability and idealism.

#### IDEALISM

India is a country known for its idealism. Some people rightly question, where was the requirement to agree to cease fire in Jammu

and Kashmir when the enemy was on the run and agree to settlement by UN? The case lingers on because of initial mistake. Similarly, why did we hand over Tibet to China when even the mighty British Empire considered Tibet essential for Indian security? Such idealism has indeed done harm to India but at the same time we have to remember that we had inherited a kind of idealism not very tenable in the world which somehow still believes that might is right. Gandhi and Nehru's vision of the world and humanity was different from the realities of life. Compare statements such as "if you want peace prepare for war" and "if you want peace prepare for peace", as propounded by Nehru. Luckily, India has become wiser after the events and we are learning to come to grips with realities of life. The Indian security does not lie within its frontiers but extends farther. We must not sit silent and watch super power mess in the Indian ocean; it affects us and more so because of Exclusive Economic Zone. We must not accept presence of hostile powers in our neighbouring countries. Tomorrow, if China encroaches into Nepal, Bhutan, Burma or South East Asia we must intervene.

Idealism faces some genuine problems in international relations. A superpower would like to dominate the world but why should the other permit? Bertrand Russell was of the view that there should be only one world power; it makes little difference whether it is US or Soviet Union, for the simple reason that one world government possibly cannot neglect its own people. But many countries, particularly developing countries feel that human freedom and dignity are safe only when there is a balance of power. One world power would amount to tyranny. Here we have the views of Anatole France in his book *Revolt of the Angels*—'God conquered, Satan would behave as tyrant'. India believes in pluralism. There is also a practical consideration—whereas international peace and order are most desirable, no country wants to sacrifice its own interest. The countries of the world follow their national interest in economic, political and military matters. Colonialism has already been replaced by neo-colonialism. World without tension remains a dream but one does hope that order emerges out of disorder. Idealism cannot be at the cost of security. A nation to propagate its idealism must first be able to live as a nation.

National security elicits different responses from the nations of the world and force them to follow strange paths. The superpowers in their desire to maintain balance have developed capability to destroy the world several times over. The developed countries of the West are forced to enter into alliances despite their desire for non-prolifera-

tion and nuclear disarmament. Those who profess peace and world order practise something entirely different. Military line-ups are made without any relation to ideology and aspirations of the people and changes are made with fair ease. Own interest is always paramount, nor is trust ever complete, for example—West Germany may agree for the installation of MS missiles, but insists on physical presence of American troops on its soil for the simple reason that in the event of war let the American troops face equal destruction. Is there, then no place for idealism ?

No nation, no society can live without idealism and pragmatism as philosophy does not deny idealism. The world situation is complex and we have to examine our idealism with regard to the totality of the situation. Idealism must be endemic to the people and capable of implementation. "Nationalism in itself is not a good thing", admits Radhakrishnan, "but its value lies in the fact that people should be allowed to grow according to their culture". Radhakrishnan has raised two important aspects is pluralism amongst the societies of the world and its validity. Our idealism such as neutrality, secularism, non-alignment, help to the deserving countries, international peace and order etc. are the part of our socio-philosophy and culture and hence valid. The question remains of its feasibility for implementation. Now, neutrality and non-alignment in the present world of blocs and alliances is not an easy proposition, though its desirability is not questioned. Luckily our country is large enough to maintain neutral stance but it calls for extreme care and caution.

#### SIZE OF ARMED FORCES

It is alleged by some quarters that India maintains a very large number of Armed Forces which is not commensurate with the security requirement and its economic condition. If such an assessment is based only on numerical strength, it is not incorrect but is highly erroneous from other considerations. There is no doubt that the size of Indian Armed Forces is very big compared to other countries, but one has to bear in mind her commitments. India has a long live border with Pakistan and China, and both of them have large armed forces. In the East, India has friendly relations with Burma, but here she faces the problem of insurgency in Nagaland, Manipur and Mizoram. Besides, the terrain of each sector is so diverse that it needs different organisation, weapons, equipment and above all reorientation training. It is also not possible for her to switch forces from one theatre to other because of Sino-Pak collusion. Numerically, we may be large but, we are not superior in the quality of weapons and

equipment. In the South, the Indian ocean has become alive with tensions. Taking these factors into considerations, our armed forces are not big. On the other hand we lack reserves. We have no forces to deal with possible Chinese expansionism in our neighbouring countries. Those who advocate, that if China threatens neutrality of our neighbours we must intervene, should also think in terms of how and with what ?

#### DEFENCE EXPENDITURE

India spends 3.5% of her GNP on defence which is one of the lowest in the world. The contention that a development can be hastened by reducing expenditure on defence is highly theoretical and incorrect. If national or per capita income is the only indicator, then the oil rich countries should be regarded as most developed. Development follows its own course and takes its own time. Soon after the defeat of Pak Army, Bangladeshis were shouting the slogans of 'Sonar Bangla' but Sonar Bangla does not come about so easily, freedom may. This is the kind of fallacy which all the developing countries, in their enthusiasm, suffer from. Both China and India, starting from about the same period, have followed different strategies for development and yet one cannot be called more developed than the other. We are just about reaping the benefits of colleges, various training institutions and research organisations and have yet to go a long way. Even if we drastically cut our defence expenditure, it will make no immediate or meaningful impact on economic development.

A more mature analysis will reveal that defence and development go together. As countries develop, so do their security requirements. The military enthusiasts will do well to bear in mind that country itself must be worth defending. The benefits of defence and development are complimentary. However, no ideal percentage of national income can ever be laid down between defence and development. It would depend upon commitments and in this respect, we are not well placed like Canada or Australia. Considering the totality of situation, our defence expenditure needs upward revision.

#### CONCLUSION

National security is a very comprehensive subject, not merely military. In this article an attempt has been made to analyse only one aspect i.e. external environment. Those, who feel that all is well in our immediate neighbourhood and the danger lies father away in the West must rethink. Also, we should not be taken in by friendly



overtures by China and Pakistan. Friendship with China and Pakistan are very desirable but valid only if we maintain military balance. We should also bear in mind that overall situation has deteriorated and we do not know when the explosion will occur and where. That, we have to maintain parity is obvious, but what we have to look into is a little more distant future. The tranquility in South East Asia may get disturbed. Military preparations take time and need money. In the present world of blocs, neutrality and non-alignment are difficult and expensive propositions. It is good to follow the path of non-alignment or equi-distance (if you like), but then we have to pay its price.

*(To be continued)*

# Whither Our Armament Industry ?

COLONEL S TALWAR

*"Israel started its factories in 1967. In 1976 were employed over 18000 people in the aircraft factories. By 1977 it was exporting US \$ 1 Billion a year"*

—A Sampson in "The Arms Bazaar"

## INTRODUCTION

ON 29 Jan 82, The times of India published excerpts of a UN Study Report which in its conclusion had summarised that the world military expenditure is in the region of US \$ 500,000 million and could go up as much as \$ 940,000 million in the next two decades. The prospect for the year 2001 AD is thus one of acceleration in the global military expenditure.

It is also revealing that the USA, USSR, France and the UK accounted for nearly 80 percent of arms exports during 1974-78 whilst the developing countries absorbed 75 percent of the arms sales. To illustrate the magnitude of sales, USSR sold 1,780 combat planes to the Third World in 1981 whilst the USA disposed off 510. But the latter either gave away or sold \$ 50 billion worth of arms between 1950 and 1966 which in quantitative terms includes 9,300 jet fighters 8340 other aircraft, 19,827 tanks, 31,360 missiles, 25,106 field guns, 71,174 machine guns and 448383 other combat vehicles<sup>1</sup>.

In accordance with the data published in the SIPRI Year Book 1981-82, there have been about 130 armed conflicts since 1945 ; and almost all of them fought exclusively in the Third World countries. For the arms importing countries, the paid price for the equipment represents only an initial cost entailing subsequent economic and political liabilities which go far beyond subsequent maintenance and operations.

Today, arms manufacture is the world's fastest growing business. This sophisticated and highly capital intensive industry not only employs about 400,000 leading scientists but almost 40 percent of manpower in military research and development in the countries of the developed world.<sup>2</sup> The results, armies have become technology based,

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1. The War Business, by George Thayer

2. SIPRI Year Book, 1981/82

the soldier seems to have become an instrument of the weapon system, the cost of fielding an equipment has sky rocketed and the process of 'equipment obsolescence' become high. The situation is further compounded where regional animosities have made new nations to acquire not 'cast-off' equipment but brand new systems despite lack of an industrial base, maintenance facilities or skilled manpower. The scene does not end there. Over the last decade, the armament industry besides ushering in qualitative improvements in the present weapon systems with monotonous regularity, has also broken ground in 'frontier technology' with regard to precision guided munitions, high energy lasers, fuel air explosives, charged particle, electro-optical sensors, satellite based guidance systems and the like. Nations have found arms manufacture and export a lucrative means of balancing international trade and 'influencing' friends. Thus following on the heels of the major exporters are countries like Spain, Israel, Sweden, Italy, China and Switzerland. We also have South Korea, Japan, Taiwan and even Singapore. Brazil and Argentina are other contenders from the Southern Hemisphere.

At the end of WW-II, excepting European nations and Japan, India started with an advantage over others by possessing the basic infrastructure especially in the field of small arms manufacture, aircraft repair and overhaul facilities. Since 1947, massive investments have been made in an endeavour to become self-reliant in defence needs. We have made headway: but have we achieved a breakthrough or are we stuck due to bureaucratic controls, lack of higher direction as well as political, industrial and economic constraints of our own making? This paper, therefore chooses to address itself to the obtaining of global and local stances and so postulate a meaningful option for India's arms industry.

#### THE WORLD SCENE

The history of arms manufacturing industry eventually goes back to the 1880s when manufacture of armaments for warships was contracted out to private companies to stimulate inventors and manufacturers to vie with one another to produce the best possible weapons. Since then, military technology has tended to develop along a path parallel to that of Industry and economics. The arms industry has not only become capital intensive but the cost of weapon systems has also achieved astounding heights. For instance, during the 1940s a Spitfire cost £ 10,000 while in the 1960s the Lightning fighter £ 500,000. Today, a new generation aircraft is in the region of Rs. 10-15 crores a piece<sup>3</sup>. The irony is that despite clamour for world peace

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3. The Arms Bazaar, by Anthony Sampson.

and arms reduction, the weapons sales is a priority item in the economies of industrially advanced countries. Consider USA and USSR ; perhaps the world's most vocal proponents of disarmament, are also the world's largest sellers of arms. Interestingly, the French white paper of 1972 reads "armament policy comprises an industrial policy which will satisfy those military needs of the industry under conditions necessary for its competitiveness and prosperity and in harmony with national policy on industrial development".

The situation insofar as importing countries are concerned is further made complex by the 'game of numbers' being played by exporting nations alongwith their follow-up high pressure sales programmes. For example, a \$ 100 million cruiser, \$ 500,000 tank and \$ 10 million fighter is being challenged by the proliferation of less expensive weapons.<sup>4</sup> This has impelled the importing countries to field an array of weapon systems without fully realising that most of these were designed primarily for the European environment or to suit the needs of super powers or are merely as 'sales gambits'. But then the importing nations also become gullible to high pressure sales due to the lack of necessary expertise and the kick-backs involved. To quote, in 1967 the USA spent more than \$ 750,000 promoting US arms at the Paris Air Show alone. The US government was overshadowed by US firms who collectively spent \$ 2.25 million pushing their wares<sup>5</sup>.

The stranglehold of exporting nations as discussed above, is made complete by the rapidity of development of newer weapon systems which must be adopted and absorbed quickly before the adversary does or the 'process of obsolescence' catches up. This not only results in fervent acquisition of weapons but also of accompanying spares, tools, software and a large number of technicians. Where transfer of armament technology is involved, it follows an intensive dependence on import of complete know-how, foreign dependence! For the exporting nations, this 'rip-off' is tremendous ! From this, one of the lessons for India is obvious .. That arms exports provides a lucrative means of balancing international accounts and creating prosperity. It stimulates economic and social stability by the maintenance of a high and continuing level of production and independence of own action while being able to influence 'customer' nations.

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4. A New Role for the Medium Power, RUSI : Defence Studies 1977.

5. The War Business, by George Thayer.

## THE INDIAN SCENE

In India, the armament industry continues to be in the 'core sector'. It is exclusively managed and controlled by the Government. Vast funds have been invested to achieve self reliance and indigenisation. For any erudite analysis it will be pertinent to recall in brief the existing infrastructure. As is generally known, the Defence Research and Development Organisation (DRDO) has a network of about 31 laboratories and establishments, employs over 3600 civilians and service scientists and 20,000 in the non-gazetted staff. It has an outlay of approximately 2 percent of the annual defence budget. The Department of Defence Production was formalised with the aim of directing, coordinating and strengthening the efforts for the production of armaments and other stores. The quest towards self-sufficiency is envisaged to be achieved primarily through the Departments' 33 factories and a group of nine public sector undertakings. These concerns employ approximately 1,50,000 and 95,000 workers respectively. Then the Department of Defence Inspection fields another 25000 or more in their staff<sup>6</sup>. In accordance with data published in the Hindustan Times of 17 Dec. 82, the production ex-factories and other concerns under the Department of Defence, was of the value of Rs. 813.7 crores; an increase of nearly 70 percent over the previous year's figures. Now how much is it due to added costs of inflation and other overheads, was not been given; nor did the data mention the degree of assurance levels or targets that were met on 'equipment by equipment' basis. Those in uniform would have to be more than gullible to concede any worthwhile increase in availability of equipment and spares from indigenous sources. This assessment is only in passing. Though it is not the endeavour to belittle the strides made by our defence oriented industries but by the same token we would be subjective in our analysis if the weaknesses are not spoken of. Let us take some of the major weapon systems produced :—

(a) The 75/24 mountain gun is deemed to be from the drawings of a Canadian version. Today, its end-impact falls short of expectations.

(b) The 105 mm IFG Mk II is a 'near cousin' of the British gun of the same calibre. Then the production slippages have caused the desirability of importing a substitute.

(c) The much heralded Vijayanta tank is so plagued with 'automotive problems' that late Maj Gen Sukhwant Singh in his book 'General Trends' stated that 80 percent of the fleet was off road before the 1971 War.

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6. Indian Armed Forces Yearbook : 1980/81.

- (d) The HP-24 fighter aircraft after 'much ado' is heard of no more ! The armed Light Helicopter is yet to fly.
- (e) The development of Main Battle Tank for the 1970's is now termed as of the 1980's which is likely to be fielded in the 1990's.
- (f) Except for the indigenised fabrication of Leander class frigates and its follow-up-ship of the Godavri Class, the major warships of the Indian Navy are of foreign origin.
- (g) We are still stuck with a first generation anti-tank missile introduced in the late 1960s.
- (h) The Shaktiman vehicle is costlier than its counter-part acquired from trade.

If one wishes to contest on behalf of the defence industries, he will have to answer the following two queries in the first instance :—

- (a) The 'Meiji Restoration' movement in Japan in 1968 brought in industrial transformation which in a span of 32 years provided Japan with muscle leading to the defeat of Czarist Russia in 1905. In the 35 years after independence we have yet to achieve this status insofar as our defence industries are concerned.
- (b) Despite all claims, we continue to import capital intensive weapon systems with monotonous regularity. In accordance with the SIPRI Year Book, our shopping list since 1975 includes the following :—
  - (i) *Army*. BHP-1 ICVs, T-72 tanks, bridging equipment, Schilka Air Defence Systems, SAM-6s and Milan missiles.
  - (ii) *Navy*. Missile boats, IL-18 aircraft, Kashin class destroyers, Nanuchka class frigates. Type 209 Submarines, Sea Harriers and miscellaneous support ships.
  - (iii) *Air Force*. Jaguar DPSA, MiG 23, MiG 25, AN-32, MI-8 helicopters, Mirage-2000 aircraft and HOT missile system.

Allied with these is the mind-boggling acquisition costs. The Jaguar deal was supposed to be in the region of Rs. 1500 crores. The deal with the USSR for some aircraft, tanks and other equipment has been rated at \$ 1,630 billion ;<sup>7</sup> and in accordance with Dr RR Subramaniam's assessment in his article in the Illustrated Weekly of India of 17 Jan 82, the Mirage-2000 deal may well be in the region of Rs. 5000-6000 crores. This is big money ! And we cannot afford to be complacent about it. What then ails our armament industry ?

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7. World Armaments and Disarmaments, SIPRI Year Book 1981.

Mary Kalder and Eide in their book, 'The World Military Order' attribute following specific characteristics why countries like us have failed badly in arms production :—

- (a) Steady increasing R & D expenditure, which results in even more complex weapon systems.
- (b) Fast rate of production innovation which leads to rapid obsolescence.
- (c) Steady increasing overheads and infrastructure costs resulting in high indirect costs.
- (d) Increase in unit costs due to shorter production runs.
- (e) Increasing complexity implying longer time in follow-up controls on quality and production by the licensor.

To this list of technical 'flaws and fractures' one can safely add the following :—

- (a) Lack of defined objectives.
- (b) Decline in production due to prevailing labour instability and allied industrial relations leading also to high unit cost.
- (c) Lack of dynamic management and bureaucratic tardiness.
- (d) Lack of accountability despite some of the revelations by the public Accounts Committee.

#### SOME ANSWERS

India has a low rate of growth, poor productivity and chronic trade deficits. It is no use adopting a 'holier than thou' attitude when arms export can help balance off international trade and provide more job opportunities at home. It is of interest to recall that the West which is a major importer of West Asian oil, is also the major exporter of arms to this region. In fact Saudi Arabia alone absorbed \$ 7.4 billion of military equipment during 1982 while the region as a whole received 32% of the total world wide sales. Despite all efforts our oil bill for 1983 will still be in the region of Rs. 4,700 crores. Why are we shy of entering this lucrative field? Is it that South Block feels that this arms sales is inconsistent with our policy of Non-alignment, World Peace, Disarmament etc? Or is some one quoting President Eisenhower out of context when he spoke out against the influence of US military industrial complex? If these be the main reasons then we are guilty of keeping 50 percent of our citizens below the poverty line and our country economically and militarily weak. Be it as it may, the first reasoning is demolished by our quiet efforts to sell weapons and equipment abroad. This does not apply to our immediate neighbours but also includes Kuwait to whom attempts

were made to sell 50 Vijayanta tanks and the despatch of Kiran jet trainer abroad for air demonstrations and shows<sup>8</sup>. As for the forebodings of President Eisenhower, it must be appreciated that his was a totally American experience. In India, this is not possible with the Government holding a total monopoly in armament production which if even pruned and streamlined, the sensitive and capital intensive part will continue to remain in Government hands. What then is the inhibition? Are our weapons not of commensurate quality as those available elsewhere? This better not be true or else heads must roll! One hopes that all this reasoning for entering the world export market will get a fresh stimulus when one reads of the offers being made to India. According to the Far Eastern Economic Review of 15-21 Oct. 82, Russia has offered India the dovetailing of the military aircraft industry of the two countries. It also involves manufacture of spares not only for Russia but also for the requirement of Warsaw Pact countries and other nations using similar aircraft. Orders for first 10 years are guaranteed. If the deal is clinched it will bring in orders worth Rs 10 billion in the first year alone. Then Britain has offered her willingness in joint ventures with a special interest in light combat aircraft, high speed naval craft and missiles. These proposals and others to include the French offer of Mirage-4000 aircraft must be studied in their entirety to include long term political and economic ramifications.

Today, the armament industry, a totally government monopoly, is sluggish on account of lack of domestic competition and made worse by administrative ploys and technical hurdles when the sole job to some means safeguarding the department's posterior. There is too much concentrated in this core sector under the garb of vital defence interests on national security. It is time we took stock of what should remain within the ambit of a sensitive military field and frontier technology and the remainder as a consequence, progressively shed to trade and Private enterprise. And even in the sensitive field there will be non-sensitive components and assemblies which can be manufactured by the Trade. Together, this will mean more streamlined and responsive departments and concerns, more money for selective R & D work and more competition in the non-lethal/non-sensitive fields which in turn will also reduce the fear of a 'monopoly house' losing money on meeting failure with unsettling results all around. This spirit of competition can also be extended where both the private and public sectors could compete with each other for orders. As a consequence,

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8. Indo-Soviet Strategic Interests by Imroze Sagar in the Naval War College Review of Jan/Feb 1981.



it will help tone up the management in the latter who will now seek for survival better productivity and industrial relations. Outside interference will also be minimised because these public concerns will have to run along more realistic commercial lines.

In the USA, the military R & D effort rose from \$ 500 million in 1945 to \$ 8 billion by the end of 1960s. In 1980, the US Government gave away \$ 9.47 billion in R & D contracts outside its own agencies. In fact, the Department of Defence programmes account for nearly 50% of the total US R & D outlay and approximately 11.1% of the Defence Expenditure. We cannot think of such a funding when our total annual defence budget is only in the region of 5.26 billion and R & D allocations have generally remained between 2-6% of our Defence Budget which in 1975, 1980 and 1981 was \$ 2.66, \$ 4.81 and \$ 5.26 billion, respectively<sup>9</sup>. The present allocation is inadequate if we are to achieve more worthwhile break-throughs. Meanwhile funds will have to be found by in-house streamlining of departments, shedding of work in non-lethal/non-sensitive fields and concentrating all efforts on very selective R & D projects. Then obtaining clients for 'co-production' will also help bringing down cost per piece and the sharing of the R & D effort due to assured purchases and after-sales programmes. It should not be forgotten that acquisition cost is less than 50% of the life-cycle cost of an equipment. Further, this endeavour should also include regional repair and overhaul facilities. It does not require beyond simple mathematics to prove that such regional facilities are cheaper in our environment than shipping back equipment to manufacture in the USA, Europe or Russia or getting the firms to repair 'in situ'. Towards this end, Pakistan is already negotiating with Dassault for the right to service the mirage aircraft in Arab countries. Singapore intends to embark on naval yards as a regional service and repair centre for foreign navies<sup>10</sup>. In the case of latter, we could as well open our 'little shop' opposite Singapore at Campbell Bay in the Andaman Islands.

Talking of selective R & D effort, our quest should be in the realm of frontier technology or where the weapon system is going to be cost intensive or extremely sensitive. This will not only enable us to keep abreast of innovations but also help reduce our continued dependence on foreign sources of supply and consequent allied pressures. Some of the areas that invite focus insofar as the Army is concerned are as under :—

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9. Military Balance : 1982/83.

10. The World Military Order, by Mary Kaldor and Eide

- (a) Charged particle and high energy laser technology.
- (b) Tele-guidance mechanism to include precision target acquiring systems and electro-optical sensors.
- (c) Precision jamming and other EW equipment.
- (d) Micro electronics to include command and control systems and data processors which would allow rapid battlefield programming and reprogramming.
- (e) Chemical rocketry, fuel air explosives, liquid propellents, for field guns and low recoil armament.
- (f) Armour and anti-armour technology to include missiles.
- (g) High data communication satellites as also star tracking and satellite based guidance systems.
- (h) Robotics.

The above is one possible list. Allied with this is the dire need for a more cohesive coordination and understanding between various departments, concerns and agencies. It must be realised that technical, financial and developmental responsibilities cannot continue to remain separated insofar as the nation's security is concerned.

While these thrust-lines are being effected, there will continue to be odd instances where certain import of equipment would become necessary. To quote, even USA despite its vast military industrial complex, has opted for the British Harrier aircraft and the French Roland air defence system. But when we have to take such a hard decision, we must resolutely go in for the 'state of the art' technology, seek its indigenised production with provision not only for 'buy back' of spares by the original supplier but also the export of complete equipment or atleast the components in the regional markets. Then there should be 'on going' agreement for parting with the newer technology whenever there is 'product improvement' or new models fielded by the host suppliers. It is heartening to learn that tangible steps have been initiated in this direction in some of our recent contacts or proposed deals.

Last, but not the least, we must create funds and lucrative credit facilities for encouraging military sales. Our service advisors abroad should be used as a conduit for sales promotion programmes in friendly foreign countries.

#### SUMMARY

To summarise, it is postulated that :—

- (a) India must enter the arms export market to off-set her adverse balance of payment as also provide prosperity and job oppor-

tunities at home. The other accruing advantage of such a course are :—

- (i) Growth of ancillary industries.
  - (ii) Cost per item of equipment is reduced due to larger production runs thus making equipment acquisition even cheaper.
  - (iii) Part of the profits could be ploughed back in more R & D work. Then military R & D could also have certain civil applications.
  - (iv) After sales programmes of necessity also include spares, special tools, machines, technical advisers and creation of civil facilities in the importing countries.
  - (v) Uprate the expertise of our own skilled manpower.
  - (vi) R & D cost is shared by the importing countries.
  - (vii) Extension of friendly relations.
- (b) Long term perspectives, planning and coordination is so effected that the desired objectives are achieved alongside the requirements included in the Defence Five Year Plans.
- (c) The defence industry which is exclusively Government controlled should concentrate its efforts in the fields of frontier technology or where the equipment is cost intensive or sensitive in nature. The remainder must be thrown open to the private sector or trade to participate and compete.
- (d) The R & D efforts need more funding ; but money can also be found by in-house streamlining and shedding of developmental work in non-sensitive fields. Then overheads must be reduced.
- (e) Provide regional repair and overhaul facilities to include equipment sold by the major arms producers. This in time could also help us in doing away some of our base overhaul facilities existing within the defence services.
- (f) Seek 'co-production' in the manufacture of arms and equipment.
- (g) Where hard choices of equipment import have to be made, seek 'state of the art' technology for subsequent indigenisation with options on product improvement and newer models. Agreements should include clause for assured 'buy back' arrangements and terms for exports to third countries.
- (h) Defence industries under the Government must be result oriented and run along commercial lines.
- (j) Funds are raised to assist foreign military sales to include credit.

### CONCLUSION

The obtaining situation insofar as our armament industry is concerned can be best summed up in the words of TE Lawrence, i.e., too much body and too little head'; and as a remedy what has been postulated inspired by the words of the famous economist Simon Kuznets, when he said. "If technology is to be employed effectively and widely, and indeed, if its own progress is to be stimulated by such use, institutional and ideological adjustments must be made to effect the proper use of innovations generated". It has been taken out of contest, but is very pertinent to the issue being espoused.

# Alienated Leadership

INDIRA AWASTY

THERE is a growing feeling of alienation in the Army. Ignoring it, ostrich like, will not make it go away. Alienation can be at many levels, the military group as an institution versus the society as a whole; alienation between the rank and file and the officer class; alienation between elites and disgruntled groups among the middle piece officers; alienation of the bulk of officers from command or contact with troops (virtually most officers of the rank of Lt Col and above are commanding only other officers); alienation between junior and senior officers. Alienation within the group and its sub groups and disillusionment regarding the societal role of the military, have a direct bearing on leadership, making it inhibiting, distorted, egocentric, unconcerned, ineffective, aggressively internalised, dissatisfied—all leading to a breakdown of leadership within the group.

The military institution in any country and at all periods of history is a conservative regime based on authoritarian discipline and a hierarchical organisation necessary for the conduct of battles. However, war conditions are the exception to the rule and the dichotomy within the group and in its relations with society exists because modes and command styles suited to war situations are adopted as normal living conditions during long years of peace :

The special features that the Indian Army inherited from the British was its non political nature, tradition of subservience to civil authority, and a general high status accorded to officers and soldiers by society and government. At Indian Independence the Indian Army was blooded in the 1947 Kashmir operations and convinced a grateful nation about the loyalty and steadfastness of its men under arms. This national volunteer army has since fought three major wars against first class Asiatic powers and given a credible account of itself. A new situation has arisen. The geopolitical and economic constraints of our neighbours in adversary relationships and their threshold and actual nuclear weapons capabilities make the outbreak of war a moot possibility. This is not to say that the deterrent and credible role of the military can be downgraded.

However, over the years, a dissensus has appeared between the value systems of the dominant groups in the power structure of the country, and, the military personnel. Firstly, due perhaps to the lowering of the social profile of the Army officer, and more due to the marginal role allocated to the Army, now named Defence, the status and position of the military has been consciously devalued by the bureaucracy and the politicians. In the country, the dominant social value is the power of money. And the means, any means, to its access are the new Gods. The erstwhile soldier was a respected member of the rural and urban community. Today no consideration is allowed to servicemen, who are turning into dacoits and smugglers just as easily as into idlers and petty shopkeepers. Society does not respect the released soldier and cut a drift in a world ruled by money, and not justice and honour, the soldier is turning to crime or inertia or apathy. Distrust by civil officials and politicians is endemic and witnessed by the blatant and deliberate downgrading of rules of precedence at State and Central Government functions. Self respecting Army officers smart under such humiliations and have had to bear with the situation because their seniors find merit in bowing and scraping to civil functionaries, probably in hope of crumbs by way of jobs after retirement. There is dissonance in the values held as central by the Army and the civil elites. The Army alleges to uphold honesty, esprit-de-corps and community feeling. But corruption is the password in every section and tissue of Government and civil life. The Army finds itself the only exception and why should it remain so?

Estrangement of values between the military group and the bureaucratic group creates frustration, humiliation, subservience leading to unimaginative and unproductive military leadership at the top, whose image to their subordinates is one of despicable, self seeking sychophants who are bullies in their command roles. This command style then gets replicated below perculating to the humblest level.

The military as a whole feel sensitive about their 'non-productive' and 'unintelligent' role in the development of the economy of a struggling nation. Yet they do realise the vital role of safeguarding national security which rests upon them. There is acute consciousness that the public and the Government is not according them the level of respect and consideration which is their due. All this makes for unconvinced, disgruntled and disillusioned leadership within the Army. The military feels powerless in the face of even minor civil functionaries, meaningless in the context of national development and frustrated in being unable to share in the spoils of corruption being

shared by other dominant groups in society. Fortunately the military is composed of vying individuals with primary loyalty each to himself and no one commands the allegiance of a large number of men, to pose any threat to civil authority. Moreover there is no tradition of a military coup in Indian history. However these features effect the style and content and morale of leadership in the Army and are worth taking cognisance of.

There is internal alienation between officers and men, paradoxically due to two disparate reasons. Firstly the social line having somewhat merged, the jawan hasn't the same respect for his erstwhile colleague who now struts about as an officer, shoving him about! Secondly, cohesion of the military group depended on the rapport established between the officers and the men by sharing the soldiers' deprivations in war, ie, dangers, physical discomfort and food etc. In peacetime, officers cannot participate in the living and eating habits of the men, distancing themselves that far. Few officers go regularly for games with the men, or take a genuine interest in the affairs of the 'boys' under their command. The mystique of the officer class has been eroded and the nearness of the socio-economic class has not brought togetherness, rather an aloofness has grown between the men and the officers. The latter being totally emersed in self advancement on all and many planes, which is not lost on the jawans.

The impact of a large injection of officers from the ranks might create a bloc of disgruntled officers in opposition to say, NDA elites, in the middle ranks. As more fairly well educated boys are enlisting in the ranks, it is imperative to give them commensurate promotional outlets. Most jawans feel that officers risen from the ranks have a better understanding of the problems of the men. Many commanding officers find them tough and dedicated to work. However, such officers are also reported to be harsher on the men in order to enforce respect. Their relations with brother officers are not easy. Few qualify for Staff College and advanced courses. Thus their employability is limited as regimental officers and they may congregate as a disgruntled and alienated group in the middle ranks.

There is yet another form of internal alienation, that between junior and senior officers. On an intra-personal plane, the accent is on personal independence, self development and self achievement. The ethos of the Army with its fetish on authoritarian rule, curbing of initiative, promotion by seniority and not merit etc militates strongly against the spirits of the time, creating tensions within the group, challenging leadership of an unimaginative type.

The Indian Army has a peculiar history. This Army has inherited the tradition of a gentleman officer breed from the British who

had built up a native army to conquer and hold down a colonial empire. Some of the older, and thus senior, officers of today's Indian Army are bred in the British tradition of snobbishness, are autocratic, with propensities to perpetuate the old established order, rigid in their views, with an almost nostalgic ceremonialism. With democratisation, all ranks in the Army were bound to be thrown open to all castes and classes of Indian citizenry, of whom not the highest strata come forward for commissioning as officers. This is true of all armies of democratic countries the world over. Thus it is not the lowering of the officer profile that is unnatural, but what is at odds with it is the attitude and handling by senior leadership of junior officers. Outdated rituals and meaningless symbolism ought not to be insisted upon. To be effective leaders the older officers must themselves set an example of upright moral behaviour worthy of respect and emulation by junior leaders. It cannot be expected that double standards based on unquestioned privilege of rank will be tolerated by today's young officers. Once credibility in the competence and rectitude of senior leaders is established, the junior leaders can be disciplined. That the Army has approximately the same calibre of officers and men is a healthy sign. The only way that officers can now establish their superiority is not by wealthy family connections or by breeding, but by proven professional competence. To this must be added a genuine desire to understand the feelings and aspirations of the men under their command, who can now no more be taken for granted.

That there has been a change in the socio-economic base of commissioning into the officer cadres of the Indian Army is a fact of life. It is difficult to be for or against such an emergent situation. It would be too simplistic to give ready-made answers to the ideal response of an officer as to how to train his men or how to deal with subordinates, peers and superiors. Moreover everyone reacts differently in interacting with another human being and we can't have robot like orders for everyone to adhere to. The aim of this essay is to articulate the churning contents before the pot spills over, so that the changed motivations and aspirations can be matched and accepted and not resisted with outmoded yardsticks. There isn't cause for pessimism either. While the Army does stand alienated on the larger canvass, yet, by and large its very isolation makes it a fairly contented group. Moreover it is the only island of relative 'morality', whatever connotation you'd like to give the word, among the various other power conglomerations. The military has thus a dual responsibility; to set its own house in order, and, to set an example of rectitude to the nation.



# Soviet Strategy and Tactics in Afghanistan

JOHNNY MEHTA

THE 1978 coup in Afghanistan brought in its wake a steadily escalating Soviet involvement. The Russians will now be spending their fifth winter in Afghanistan. They will spend many more. In December 1979, they called their operation temporary and limited but it now has the appearance of being permanent and total. They have bitten off a lot and are evidently going to chew on relentlessly.

## THE COST OF WAR

The Soviets are spending only one to two percent of their total defence expenditure on the war and some of the cost is being recovered in kind—through natural resources shipped to the Soviet Union. The cost in Soviet lives estimated between 10-15,000 has not been quite so cheap, but not so prohibitive.

The original Russian force of 1,00,000 soldiers which crossed into Afghanistan in December 1979 has possibly increased to about 12,0000 while the traditional Afghan army has shrunk to 30,000 or even less. About 25 Soviet generals under the First Deputy Defense Minister are responsible for the country.

## SOVIET ORDER OF BATTLE

The Soviet order of battle is :-

Kabul Bagram area :	105th Guards Air borne Division comprising of 4 to 6 rifle regiments in strength.
Heart :	104th Air borne 54th Motorized Rifle Division
Shindand Frash Sector :	66th Motorized Rifle Division
To cover Khyber Pass area with headquarters at Jalalabad :	201st Motorized Rifle Division
Kabul Wanaak :	360th Motorized Rifle Division
Kandahar :	346th Motorized Rifle Division

Khanabad Feyza-  
bad Sector : 5th Motorized Rifle Division  
Mazar-e-Sharif : 16th Motorized Rifle Division

These divisions have positioned themselves along a Y-shaped formation, its stem spanning the Kabul Jalalabad Sector and its curve, the arc from Heryatan in Balkh province to Torkhandi in Herat. The infantry divisions are believed to have an average strength of 10,000 men each and the air borne divisions 8,000 each. In addition there are no less than five air assault brigades of three battalions each which use helicopters for mobility. Controlling these activities is the equivalent of an army-level headquarters at Kabul. The air strength is estimated at 150 fixed-wing air craft and 500 to 650 helicopters.

#### THE COLLAPSE OF THE AFGHAN ARMY

The Afghan Army has become a virtual ruin due to losses and desertions. The Soviet authorities cannot and do not trust the Afghan Army and have been forced to accept responsibility for the security of the regime and maintenance of law and order. The Soviets relieved the Afghan Army of man-portable anti-tank and air-defence weapons during 1980 and greatly reduced the scale of issue of all other supplies.

#### STRATEGY

The Soviets are faced with a country bigger than South Vietnam. They have but a third of the strength Americans deployed in Vietnam. Where Americans could count on Allied forces, the Soviets none.

The Soviets with their numerous airborne and motorised rifle divisions control only whatever is in range of their direct fire weapons. The rebels control the countryside and have on numerous occasions penetrated even secure urban areas. The Soviets are facing one of the largest popular uprisings of this century. Unless they were to commit massive forces at great economic cost which in any case could not be supplied without massive investments in logistic infrastructure such as railroads, they just do not have enough people on the ground to occupy vital areas. In view of this, the Russians have worked out a strategy that does not hinge on occupation of territory but on denying it to the Afghans.

Mao-Tse-Tung believed that the guerrilla must move among the people as a fish moves in the sea. The Russians intend to drain the water by concentrating of the Afghan capability of operating in a particular area by removing the people from there and its agriculture, thereby making the area unable to feed the local population or any

guerrillas. Air strikes by fixed wing air craft and helicopters are used to defeat the rebels by forcing them out of the country. The Russians also leave their buses frequently for sweep and cordon operations.

#### THE MUJAHIDEEN

The Mujahideen are brave, fearless and patriotic and are widely, admired as symbols of resistance to tyranny. But they can never win. They can make life tough for the Russians but not tough enough since they do not have the manpower, weapons and organisations to defeat a powerful well equipped foe with vast resources. The Russians are not in effective control over the countryside where the Mujahideen act freely. Russian policy is to control the capital, the cities, communications and administration. The process is one of attrition. The Mujahideen are engaged in a low level guerrilla war and the losses inflicted on the Russian forces are certainly bearable. Today the Mujahideen are becoming better armed thanks to supplies smuggled from the Afghan Army stores and from across the Pakistani border but there is little hope of the various guerrilla groups uniting to form an army of resistance. Hopes are sometimes raised by unity agreements, but tribal and personality conflicts make them crumble. The Mujahideen are also not getting the weapons they really need—the missiles to bring down the helicopter gunships, they fear most of all the gunships which ensure Russian superiority.

#### SOVIET TACTICS

When the Soviets moved across the Afghan border in December 1979, they brought with them tactics developed since World War II and based on the assumption that the next war would again be fought on the plains and rolling hills of northern Europe. The build up of conventional forces was geared to the tactics and weapons that would be deployed in such a conflict. It was believed that only armour can assure the rapid and total destruction of the enemy. It alone can achieve the swift and decisive role in attack."

Soviet tactics intended to defeat NATO in western Europe or the Chinese in the plains of Manchuria were not easily adopted to this new style of warfare. Use of battle tanks is severely restricted in high mountains except in wide valleys. Their main use is as mobile, armour protected artillery. In narrow defiles they are a distinct liability, since they are vulnerable to mines and plunging fire from above and if one tank in a column is halted, the defile is blocked. In such circumstances they require to carry infantry on top of their hulls. David Isby, an analyst of the Soviet Army notes that Soviet motorised rifle and tank units were often road bound, unable to come to grips with the

Afghans moving along the crest of the hills. Low level tactics were particularly deficient, as was marksmanship. Russian automatic fire at long ranges was less liable to hit anything than Afghan behind rock breastworks using obsolete Lee—Enfields and aimed fire. Armoured fighting vehicles fell victim to improvised weapons and obstacles. Small convoys were repeatedly ambushed until the Soviets stopped running them. The Russians were therefore confronted by an enemy that was neither so visible nor so densely deployed. While the Soviet commitment to armour kept casualties down, it also meant that Soviet commanders were unable to engage the Mujahideen actively.

#### GUNSHIPS IN AN OFFENSIVE ROLE

In the last one year new Soviet counter insurgency operations have, for the first time shown signs of deviating from those tactics. The MI-24 HIND gunships have been the one success story of Soviet military involvement in Afghanistan. Their deployment has generally limited the guerillas to night attacks and caused real fear in the countryside. The tactical benefits to the Soviets of their extensive helicopter force are potentially decisive. Quick movement by helicopters allows the Soviets to cordon off areas before the Afghans can evacuate or reinforce. Avoiding use of convoys which are likely to be ambushed, the Russians use helicopters to bring supply to positions. MI-24 HINDS are also used in a major convoy escort role. A formation of HINDS will move ahead of the convoy in order to land troops to hold key positions until the convoy has passed, after which the troops are picked up and reinserted along the route of the convoy.

#### ROLE OF AIR POWER

Soviet air superiority in the fighting is complete. The airfields at Kabul, Bagram and Shindand bristle with MIG—21s as well as ultra sophisticated MIG—23 Floggers. High altitude reconnaissance MIG—25 Foxbats have also been spotted overflying combat zones and are believed to be based in USSR. A squadron of Sukhoi SU—25 Frogfoot ground attack aircraft based at Bagram airbase have also been observed in action. The Frogfoots belong to a Soviet Air Force trials unit responsible for proving the new fighter bomber. These aircraft appear to have three underwing stores stations per side and probably carry a payload of about 10,000 lbs.

### NEW WEAPONS

The Soviets have since 1979 introduced a number of weapons especially suited to Afghan conditions. The 30 mm AGS—17 automatic grenade launcher has appeared in considerable numbers and is an excellent source of firepower, particularly since it is able to demolish Afghan rock breast works. The 5.45 mm calibre assault rifles and light machine guns are also much in use. Use of small air delivered anti personnel mines for harassment and to introduce panic and confusion is widespread. These mines are scattered from canisters by helicopters and measures 4—9" long, 1—9" wide, and 0.9" thick containing a small explosive charge in a plastic casing. The use of these mines greatly cuts down on Afghan mobility at night when they conduct most of their operations. The BMP has proved a remarkable effective cross-country vehicle in Afghanistan and can use A5 Sagger anti-tank missile launcher to provide direct artillery fire support to assaulting infantry at ranges upto 3,000 m.

### USE OF CHEMICALS

Reports of extensive use of chemical warfare by the Russians in Afghanistan have appeared in the western press. These reports highlight the use of tricothecene (T-2)—the yellow rain—normally used in areas where Soviet troops are not in contact and out of the way localities. This is normally delivered by fixed-wing aircraft and is extremely toxic and fatal within a short amount of time. The use of this agent, according to David Ishy, greatly contributes to the Soviet strategy of draining away the base of Afghan support, for nothing appears more likely to force people out of Afghanistan than chemical attacks.

### UNRELIABILITY OF NON-RUSSIAN UNITS

A particular problem arose from the fact that, the Soviets contrary to normal practice, concentrated local non-Russian minority nationalities in certain, sometimes key units because of their skills. This might be a cause of unreliability under strain, particularly if ethnic or religious reasons brought these conscripts to have less convictions of the justness of their cause. There is some evidence that this particular problem exacerbated the unusually high percentage of local conscripts and reservists drafted into the units on their rapid mobilisation, caused considerable problems for the Soviet forces in Afghanistan.

### THE SOVIET EXPERIENCE

Till today the Soviets have not published any articles relating to their experience in Afghanistan but they would appear to have been

reasonably successful in achieving their aims. It would be improper at this stage in the Afghan campaign to assume that the Soviets will be deterred by heavy casualties or indeed to construe an imbalance of casualties as a Soviet "defeat". The Russians according to CN Donnelly another expert analyst of the Soviet Army, have a record of winning not just battles but also wars because of their ability to sustain ten casualties for every one inflicted on the enemy. They seem to be profiting from their first real combat experience since 1945. There is evidence that the Soviets are sending officers on six-month tours of duty to Afghanistan, which would imply that they desire as many as possible to have combat experience.

# Decision Making—The Integrity Factor

BRIGADIER N B GRANT (RETD)

**BOTH** in our personal and official lives, one comes across complex problems which generate a number of alternative solutions. The alternatives may be many and varied, or there may be simply two states from which to choose. Generally, decisions have to be made under conditions of imperfect information. The decision to be taken therefore is to select, not necessarily the best solution, but one which under the prevailing circumstances would be most workable.

Decision makers may like to think, that their decisions aim for optimal results, and often this is implied in discussions of decision making. In this light, some writers look to the process as being a rational one with clear-cut logical or statistical basis. Others can cite good empirical evidence for decisions influenced by personality and social factors, and leading to outcomes with other than logical optimal basis. Psychologists and counsellors are also aware of the highly sophisticated concepts and theories in the area of decision making.

Due to the advent of the computer, several techniques have been evolved for arriving at the best solution to a problem having several alternatives. For day-to-day decision making however, it is not always necessary to resort to sophisticated computerised techniques, and any simple decision matrix would suffice in 90% of the cases.

The aim of this paper is not to go into the technicalities of a complicated decision making (DM) model, but to ascertain why decisions go wrong in spite of such models being based on highly sophisticated technology.

## EXAMPLE OF A SIMPLE DM PROCESS

Let us go through a simple arithmetical process to solve two day-to-day problems that confront almost all of us, namely—

- (a) selecting the best bride for our son, and

(b) selecting the most profitable plot of land for constructing our house on retirement.

#### ALTERNATIVES

It is necessary, that a problem must generate more than one solution, as if only one is offered, there would be no need to go through the rigors of this technique. For example, in the case of selecting the best bride for our son, we may have a choice of three ladies A, B and C which would meet our son's requirements. Similarly in choosing the most suitable plot of land for building a house, a choice of three alternatives D, E and F may present themselves to fit in within the budget allowed to us.

#### CRITERIA FOR JUDGEMENT

Having listed the alternatives to the problem, it must now be decided against which criteria these alternatives may be measured or judged. The criteria may be either stated in qualitative or quantitative terms as shown below—

<i>Sr No</i>	<i>Selecting a Bride</i>	<i>Selecting a Plot of Land</i>
a.	Dowry	Cost
b.	Looks	Nearness of town centre
c.	Education	Nearness of club
d.	Health	Nearness to hospital
e.	Accomplishment	Nearness to school
f.	Figure	Bearing pressure of soil
g.	Disposition	Water supply
h.	Social graces	Electricity supply point

#### DATA COLLECTION

Having laid down the criteria, we then go to the next stage namely, of collecting the data against each alternative as shown below—



Sr. No.	Selecting a Bride				Selecting a Plot of Land			
	Criteria	Lady A	Lady B	Lady C	Criteria	Site D	Site E	Site F
a.	Dowry (Rs)	8000	10000	12000	Cost (Rs)	4/FS	3.50/FS	3/FS
b.	Looks	Plain	Beautiful	Fair	Nearness to town Centre	2 Km	4 Km	5 Km
c.	Education	MA	BA	Ph D	Nearness to Club	3 Km	2 Km	4 Km
d.	Health	Robust	Sickly	Frail	Nearness to hospital	4 Km	3 Km	2 Km
e.	Accomplishments	Tailoring	Music	Painting	Nearness to School	1 Km	2 Km	3 Km
f.	Figure	35x28x35	35x30x35	28x25x28	Bearing pressure of soil	1T/FS	1½T/FS	2T/FS
g.	Disposition	Pleasant	Extrovert	Introvert	Water supply	40g/head	30g/head	45g/head
h.	Social graces	Chairman YWCA	Secy. Women's Club	Vice Chairman Women's Club	Electricity supply point	100 m	50 m	20 m

## DEVELOPING THE MATRIX

The stage has now reached for feeding the above information into the matrix. For this purpose, it is necessary to take each criteria separately and then compare two alternatives at a time. For example, if alternative A is better than alternative B, then the former is allotted one point and the latter zero point. We then compare alternative A and C, and allot points to these, and so on with other alternatives. Tabling only the first criteria as an example for the two cases discussed above, viz, Dowry and Cost of land, they will appear as shown below—

<i>Dowry</i>					<i>Cost of Land</i>				
	A	B	C	Total		D	E	F	Total
A	X	0	0	0	D	X	0	0	0
B	1	X	0	1	E	1	X	0	1
C	1	1	X	2	F	1	1	X	2

## WEIGHTAGE OF EACH CRITERIA

Before we can analyse the above data, we must determine the importance to be attached to each criteria, and the weightage that should be given to it within the resources and authority at our command, and any restraints that we may be subject to. In the matter of weightages, the normal accepted practice is to allot marks or a percentage thereof against each criteria, such that the total of all the criteria is 100. When more than one person or agency is involved, the average or weighted average may be arrived at. For example, in the two cases discussed above, the weightage that could be given to each criteria may be listed as follows. In the final analysis, the weightages will depend on each individual's prime objectives.

Sr. No.	Selecting a Bride		Selecting a Plot of Land	
	Criteria	% Weightage 'W'	Criteria	% Weightage 'W'
a.	Dowry	5 (50)	Cost	40 (10)
b.	Looks	20 (5)	Nearness to town centre	10 (30)
c.	Education	20 (5)	Nearness to the club	10 (20)
d.	Health	20 (10)	Nearness to hospital	10 (15)
e.	Accomplishments	10 (5)	Nearness to School	5 ( 0)
f.	Figure	10 (5)	Bearing pressure of soil	5 ( 5)
g.	Disposition	20 (15)	Water Supply	10 (10)
h.	Social graces	5 (5)	Electricity supply point.	10 (10)
	Total	100		100

## APPLYING THE WEIGHTAGE

The next step in the process is to take the totals of the matrices and multiply them by the weightage (W) allotted to each of the criteria. For example, for the first criteria viz Dowry and Cost of Land in each of the above cases, the result will appear as shown below—

## Selecting a Bride

Criteria	W	A	A	X	W	B	B	X	W	C	C	X	W
Dowry	.05	0		0		1		.05	2			.10	

## Selecting a Plot of Land

Criteria	W	D	D	X	W	E	E	X	W	F	F	X	W
Cost of Land	.4	0		0	1			.4	2			.8	

## RESULTANT SOLUTION

The other criterias will be similarly worked out, from which will emerge, that Bride C and Plot F are the best choice, with Bride B and Plot H in the second position. The crux of the matter however is that, if the weightages were changed to those shown in the bracketed figures, the results would have been quite different. Take the case of a single criteria like the Dowry, in practice what would happen is, that although the Indian father would show 5 against the weightage figure for public consumption, in his heart of hearts he wants the figure to be 50,—this is where we deceive ourselves in the decision making process.

## EXAMPLES OF REAL LIFE PROJECTS

Perhaps examples of some real life projects will better illustrate the importance of the weightage factor, and how it can completely misguide the decision making process. Really speaking it tants-to-amount to an exercise in self-deception. Three examples, taken from three different spheres of activities, viz., industrial, political and military, (and with which every one is now familiar with), are illustrated in the three charts shown below respectively.

## INDUSTRIAL—DEFENCE INSTALLATIONS

Let us now examine the matrix which went into the selection of the best location for an Ordinary Factory for three alternatives P, Q and R whose criteria and weightages were shown below—

Sr. No	Criteria	Loc P	Loc Q	Loc R	Weightage
a.	Cost of Land	40/FS	35/FS	30/FS	5 (5)
b.	Nearness to raw material	20 Km	40 Km	50 Km	20 (15)
c.	Nearness to rail/road head	30 Km	20 Km	40 Km	20 (10)
d.	Development of ancillary industries	5	10	15	5 (20)
e.	Development of backward area (State %)	30	20	10	5 (20)
f.	Regional balance (Country %)	10	15	20	5 (20)
g.	Availability of water	4000 g	3000 g	4500 g	20 (5)
h.	Availability of power	100 Km	50 Km	20 Km	20 (5)

The next step was to take the respective totals of each criteria and multiply them by the weightage factor shown against them in para above. This was tabulated as shown below—

Sr. No	Criteria	Wtg 'W'	P	P×W	Q	Q×W	R	R×W
a.	Cost of Land	5	0	0	1	.05	2	.10
b.	Nearness to raw material	20	2	.4	1	.2	0	0
c.	Nearness to rail/road head	20	1	.2	2	.4	0	0
d.	Development of ancillary industries	5	0	0	1	.05	2	.10
e.	Development of backward area (State %)	5	2	.10	1	.05	0	0
f.	Regional balance (Country %)	5	0	0	1	.05	2	.10
g.	Availability of water	20	1	.2	0	0	2	.4
h.	Availability of power	20	0	0	1	.2	2	.1
	Total			.9	1.0			1.1

From the above table it will at once be apparent that R was the best location with Q as the second choice. However, the weightages mentioned were altered to those shown in the brackets, and obviously the result was quite different. What normally happened was that, at the time when the project was first envisaged and when its techno-economic survey was being made, the weightages were as mentioned originally. At the time of its sanction however, perhaps unconsciously so, the powers that may be, changed the weightages (to those shown in the brackets) based on considerations other than purely techno-economic ones. These later weightages however were never projected in writing, and thus never entered into the matrix calculations. Nevertheless the tragedy is, that due to these subjectives and preconceived weightages, a site other than which the matrix would indicate was selected. This is nothing new when selecting plant locations in the Public Sector or the Defence.

#### POLITICAL

An example of this can also be seen in the decision making process that must have gone in the declaration of the last emergency in India, and also those in neighbouring countries like Pakistan and Sri Lanka.

Sr No	Criteria	WEIGHTAGES	
		As Projected	Not Publicised
1.	Law and Order	25	5
2.	Industrial Disputes	10	5
3.	Absentism	5	5
4.	Punctuality of Services	5	5
5.	Attitudes of Public Servant	5	5
6.	Anarchism	20	5
7.	Population Control	5	5
8.	Removal of Poverty	10	5
9.	External Threat	10	5
10.	Staying on in Power for Good of Country	5	55

Note: The criteria which were published are those shown on the Left, while those which were not made public might have been as shown on the Right.

## MILITARY

The decision making process that must have gone into the recent selection of a Deep Penetration Support Aircraft for the Air Force, would be as shown below—

Sr No	Criteria	Mirage FI	Jagur	Viggen
1.	Fire Power	8	9	8
2.	All Weather	9	10	9
3.	Survival			
	a) On missions	9	9	9
	b) On ground	8	9	8
4.	Weapon System	8	10	9
5.	Manouvreability	8	10	9
6.	Endurance	10	8	9
7.	Primitive Base Operation	10	8	9
8.	Training	10	8	9
9.	Maintenance	8	8	8
10.	Replacements	8	8	8
	TOTAL	96	97	95

Note ; It will be seen that from the techno-military point of view, there is very little to choose from the three aircrafts.

Although the original selection was for the Jagur, the latest thinking is for the Mirage FI. Obviously, other weightages like political leanings must have gone into the decision making process, and possibly quite rightly too.

## SOME OTHER DECISION MAKING GIMMICKS

## USE OF CONSULTANTS

There have been occasions, when a Commanding Officer (CO) wishes to carry out a particular scheme, but which is being opposed by the members of his staff. The CO has not the necessary will power and personality to force this through, he therefore employs a 'consultant' to do this for him. He explains to the consultant the end result that he wants, and asks him to make a computer programme which will give him this. At the end of the exercise, the CO presents the report to his staff, who then accept the result as one

which was analysed by an outsider who had no axes to grind, and one which was electronically processed and as such was not influenced by the thinking of CO; thus everyone is happy. Whether the scheme itself is correct, is another matter.

#### SELECTION OF A NEW PRODUCT

How often we have heard that the CSD has launched a new product for introducing in the army, after carrying out intensive market survey for it, and yet the product failed to make an impact. On analysis of such projects it was found that, in almost all cases the marketing manager who launched the product, was in its favour right from the beginning. Thus inspite of the market research inputs which were fed into the computer, due to the strong personality of the marketing manager, weightages were given to factors which in the normal courses should have been rejected. Failure to do this resulted in the launching of a wrong product which was a favourite of the marketing manager but not that of the Services.

#### CONCLUSION

All decision making techniques including the use of computers, assume, that we keep an open mind throughout the process and do not feed into it any preconceived ideas, as that amounts to having already made the decision and then using the techniques only to justify the end result. The most vital element in the process, is the importance we give to the weightage factor, which in most cases is never projected in writing, and thus never really enters any matrix calculations. Nevertheless, the tragedy is, that due to these subjective and preconceived weightages, invariably a correct decision perhaps may be taken, but for the completely wrong objectives. It is in this respect that, even sophisticated decision making techniques with the use of computers fall flat. Thus any decision making techniques, no matter how sophisticated, is only fool-proof, as long as the weightages factors are not tampered with to suit 'unmentionables' and 'hidden' considerations. In other words, it is the integrity factor which ultimately will spell the correctness or otherwise of a computerised decision. No matter what technique is used, unless our objectives are clear, and more than that, scrupulously honest, we would invariably be arriving at the correct solution but to a wrong motive, and then blame the computer for it.



# Development of Initiative Amongst The Junior Leaders

COLONEL K S SETHI

*"All too often I have heard—officers complain, they do not give me enough to do, not enough responsibility".*

—General Aubray Newman

## INTRODUCTION

THERE is a continual endeavour to change the tactical and strategical doctrines and weaponry to face the new threats and to make use of the most recent technological advances. The emphasis invariably seems to be placed on some items of hardware—this weapon, that vehicle or the other computer system. We must, of course, continue to assess our needs and develop or procure the best that our technology can offer to our national defence. At the same time, we must be aware that this technology offers significant advantages in areas other than hardware also; particularly in those areas which relate to our most precious resource—junior leaders. Scientific findings, over the years, have synthesized human behaviour into methods and techniques useful to effective leadership within our organisation and system of regimentation.

The warfare has become more complex and its dimensions expanded manifold. It is impossible for a commander to anticipate enemy reactions and other bottlenecks at progressively lower levels of commands and give solutions in terms of executive orders to the junior leaders well in advance. In the absence of such orders, therefore, more than ever, there is a requirement for the junior leaders to recognise their responsibility to take appropriate action consistent with the situation to contribute effectively to mission accomplishment.

In many ways, the junior leaders of today are quite different than yesterday. The leadership technique that we apply, therefore, must reflect an expanded recognition and understanding of this fact and take fully into account the junior leader's increased level of awareness and education, his changing values and attitudes, and the complex social pressures bearing on him.

This does not imply that our leadership objectives must change. Our Army always has been and must continue to be oriented on mission accomplishment. Thus, our ultimate leadership objective must continue to be mission accomplishment, an objective which is fully compatible with a leadership approach that includes reasonable consideration of those who get the job done—the junior leaders. The aim of this paper is to discuss the development of initiative amongst the Junior Leaders.

### PURVIEW

This paper will be discussed under the following headings :—

- (a) Spectrum of leader (Commander)—junior leader relationship.
- (b) Motivation by leaders.
- (c) Guidelines for junior leaders.

#### SPECTRUM OF COMMANDER (LEADER)—JUNIOR LEADER—RELATIONSHIP

Functioning of a junior leader cannot be isolated from the Commander (Leader) he serves. Therefore, it is important to review the relationship between the leader, the lead (junior leader). Intrinsic in any interaction between the leader the junior leaders, is an appreciation of authority and responsibility. For too often; however, the responsibility is assigned but the authority and resources are not delegated down the chain of command. This restricts functioning of the junior leader and curbs his initiative.

It is desirable to understand the power and responsibility relationship as operative in our units. Essential to that understanding is the notion that every leader is also a follower and that with power, there is corresponding responsibility. As Voltair said "I am a leader; therefore I must follow". Although it is difficult to discretely describe where authority ends and leadership begins, it is certain that merely holding a position of authority in itself does not ensure leadership. Formally operative leadership in a unit gives the leader the right to act as commander but makes the junior leader responsible for the equipment he holds on charge and he has to comply with the army regulation, rigid standing orders, commanders' policies and maintain standards. So it is a case of responsibility without any power for a junior leader. Unfortunately, many with the military service, when analysing the leadership standards, focus on formal authority and responsibility. The formal spectrum is easy to observe and inspect and is short range in nature.

Informal operative leadership within units bestows the leader with leadership which establishes climate of motivation and develops

initiative amongst junior leaders. This stimulates junior leaders to contribute in an extraordinary way to fulfil expectations of the leader in the fulfilment of the mission by anticipating problems. The informal spectrum is long range and is evident only after a commander (leader) has been stabilized and knows his subordinates. Simply stated, formal responsibility is an obligation imposed from above; informal responsibility is initiative developed from within. The power which is informally operative within leadership is the crux of leadership and that what is needed to be developed in a leader are skill and proficiency. The leaders must set the example for others to emulate by following the principles of leadership as given below :—

- (a) Know your job.
- (b) Know yourself and constantly strive to improve yourself.
- (c) Know your men and attend to their welfare.
- (d) Keep your men informed.
- (e) Set an example.
- (f) Ensure that any task, given by you, is understood, supervised and completed.
- (g) Train your men to function as a team.
- (h) Make sound and timely decisions.
- (j) Seek responsibility yourself and develop sense of responsibility among your subordinates.
- (k) Employ your command accordingly to its capabilities.
- (l) Accept responsibility for your actions.

Leadership, then is the ability to influence junior leaders in such a manner as to effectively accomplish unit missions while enhancing his sense of well being, willing obedience, initiative and loyal cooperation. Hence leadership should be an informal process and is not necessarily attained by virtue of rank and assignment.

However, it is incumbent upon the junior leaders to carry out certain actions in the direction of completion of the mission without executive orders. General Aubrey Newman says : "All too often I have heard—officers complain, they do not give me enough to do, not enough responsibility." These officers never seem to realise that in saying this they have confessed their failure to meet the responsibility to be a self-starter.

The classic 1939 Studies of Lewin, Lippel and White concentrate only on the leader: his style, his ability to accomplish his mission, his concern for the welfare of his junior leaders, and his characteristics. Some of these researches imply that the leader is more important than the other two of the TRIAD variable operative within leadership

climate: situation and junior leaders. Now for the first time, Dr. Arthur B Sweney, of the Centre of Human Appraisal and Communications Research in Wichita, Kansas has provided us with the Response to Power Model which deals with the dyadic interaction between the leader and junior leaders within a given situation within the model. Dr Sweney designates three leadership and three junior leadership roles interacting within the 'chain of command to accomplish a mission. In essence, we examine relationships between leaders and junior leaders as opposed to the personalities of either. These are given in succeeding paragraphs.

#### AUTHORITARIAN

The authoritarian leader is highly structured, directive, paternalistic, coercive, subjective and a problem seeker. He blames others, accepts few and prefers theory X which states people are bad, lazy, stupid and need to be forced to work. Mission occupies most of his time; junior leaders, very little. He is unable to organise functionally, is personally competent, and desires to be intimately involved in all the activities of his unit.

He retains authority and resources and makes all the decisions. He invariably maintains close control over his junior leaders and is highly restrictive. This single factor kills all desires of junior leaders to take action on their own. They only become a tool and do what they are told and no more, thereby impeding the progress in fulfilment of mission.

#### PERMISSIVE

The other extreme leadership style is the permissive style. The permissive leader is unstructured, non directive, subjective, seductive, indulgent, kind and dependent. He accepts many blames himself, and believes people are good and need love. He repays work with kindness. He readily delegates authority, assigns responsibility and provides resources to subordinates. The main failing in this type of leadership is the lack of direction and supervision of critical points.

#### EQUALITARIAN

The equalitarian is the preferred leadership role. The equalitarian leader is flexible, participative, rational, objective, knowledgeable and seeks solutions. He accepts and rejects others moderately and prefers theory Y; in that he believes people are intelligent, motivated and know their own job. He sets and enforces standards and ensures the effective involvement of his junior leaders to produce quality output. He develops his subordinates while demanding proficiency and discipline from them. He accomplishes his mission through his junior

leaders based on his analysis of the situation. He delegates authority, assigns responsibility as appropriate and tends to control his junior leaders by supervision.

#### JUNIOR LEADERS

*Rebel.* Rebel is competent, protested and mutineer. He seeks authority but refuses to accept responsibility. He blames others, rejects many, is sadistic, and believes his superiors are greedy, unintelligent, wrong and cause problems.

*Ingratiator.* Ingratiator is the true 'organisation man' submissive, masochistic and blames himself. He believes superiors have a right to avoid personal blame, and that 'might makes right'. When the boss tells him to do something, whether appropriate or inappropriate, ethical or unethical, he replies: "Yes Sir". He never does more than the boss requires and does not qualitatively or selectively analyse hierarchical requirements. When confronted, he reverts to strictly literal interpretation of the manual or regulation. He is the true bureaucrat.

*Cooperator.* Most preferred style is cooperator, who is honestly critical, an idea man, not preprogrammed, creative, imaginative and seeks solution. He assumes his superiors are reasonable, wants the truth, and will reward their subordinates according to their real contribution.

He tolerates the authoritarian, works with the equalitarian and pities the permissive boss. He wants to contribute as much as possible to the mission. He recognizes the resources his commander has and those he needs to accomplish the mission.

#### RELATIONSHIP BETWEEN LEADER AND JUNIOR LEADER

An analysis of the characteristics of both the leaders and the junior leaders is given below:

(a) *Combination of Equalitarian and Cooperator.* The best relationship for organisation between leader and junior leader is equalitarian and cooperator because both these individuals share the power and the responsibility, are imbued by the mission and mutually contribute towards high quantity and quality output. Stabilised relationship in the chain of command are essential for their relationship to prosper.

(b) *Authoritarian and Ingratiator.* Relationship between the authoritarian and ingratiator is quantitative but not as qualitative as the former, because only authoritarian is creatively contributing to the accomplishment of the mission. The ingratiator follows orders—nothing more. His initiative is curbed. There is much short term success and little long range accomplishment.

(c) *Combination of Permissive and Rebel.* The results are similar to Authoritarian—Ingratiator combination in that only one—the rebel contributes. The rebel seeks authority, but does not accept accountability or responsibility for his actions. Since only the rebel contributes, organisation output is of limited quality and quantity. This is because of lack of participation, direction and supervision by permissive leader.

(d) *Combination of Permissive and Ingratiator.* They spend all their time congratulating each other on what great fellows they are to the detriment of the organisation because very little is actually accomplished. The relationship is overly supportive and people oriented.

(e) *Combination of Authoritarian and Rebel.* This combination is confrontive in nature because while the authoritarian wants to retain authority the rebel seeks authority. Each has his own way of doing the same thing and hard headedly remains fixed in his closed mindedness. The more they are at odds with each other, the more detrimental and debilitating they are to the organisation. Although both are creative and capable, little is accomplished. Hence, the rebel is transferred, fired or placed in a job created just for him as a special projects officer. On the other hand, the authoritarian leader can try to develop his rebel sub-ordinates. One technique the leader can use, which allows the sub-ordinate to get a piece of the powerpie—is to assign the rebel a task consistent with his potential, allocate sufficient resources, give general guidance, and establish a reasonable accountability. In accepting the responsibility, the rebel becomes more of a cooperator, and in sharing some of his power the leader has moved more towards an equalitarian style. The confrontation will probably be eliminated because both individuals are contributing, qualitatively, towards the mission accomplishment. Essentially the leader must use his informal power to develop junior leader.

This in short is an assessment of the Response to Power Model. It is an applied guide. When coupled with the power and responsibility matrix, the third basic variable of leadership; 'situation', can be plugged into the relationship to indicate what the leader should do to extract maximum initiative from junior leader to raise the potential of accomplishment of mission within the informal operative spectrum.

#### MOTIVATION BY LEADERS

The establishment of a climate of motivation is the focal point of development of initiative amongst junior leaders with a view to attaining highly proficient and well disciplined unit. Motivation refers to the promoting of action and the impelling of human behaviour. But the force which sets high achievement oriented behaviour into motion is an internal force which springs from each individual. The common misconception concerning motivation, that the leader

“pushes” is based on the assumption that work is unpleasant, that junior leaders are lazy and that the leader must coerce in order to get results. In this atmosphere, the moment the leader is gone, the work stops, for people tend to behave the way the boss expects them to behave.

Another misconception that the leader must “pull” junior leaders by promising incentives is foul based. While there is no doubt that incentives and rewards have a place in reinforcing behaviour but they are not of themselves motivators. Just like the push technique, the pull method may produce activity, but excessive dependence on incentives can create a leadership monster.

The leader does not motivate. Junior leaders motivate themselves. The leader's job is to create a climate in which subordinates understand that they may attain their personal goals by behaving in ways which are congruent with the units accomplishment of mission. The climate of motivation is created through efforts by the leader to balance the expectations of the informal spectrum of authority. The degree to which each party is successful directly relates to the effectiveness of the unit. This establishment of a climate of motivation amongst junior leaders leads to high quality performance which results in mission accomplishment.

Climate of motivation may be achieved by following actions :—

- (a) Fair treatment, allocating worth while task and challenges to junior leaders' capability.
- (b) By making the junior leaders to realise Army's expectation of the soldier in the informal contract, discipline and proficiency.
- (c) By ensuring high morale and esprit-de-corps—being the hinge pin between the Army and junior leaders expectations.
- (d) Training—a catalyst to achieve both the Army's and junior leaders' expectations.

The climate of motivation is complex and intangible. The leader exerts influence through his actions and orders. If his actions and orders are based on an understanding of junior leaders' expectations, they will be better received and exhibited by the junior leaders. Such an understanding is executed through fair treatment and meaningful work. Junior leaders must have the feeling that they are doing worth while work and that their efforts are being put to good use and that their time in Army is useful.

All these steps are designed to place the junior leader in job that meets the individuals job expectation and ability. It also gives him a sense of achievement and satisfies his ego. Additionally, the leader

should explain to the junior leaders the importance of the position or task to be performed and outline the standards of expected performance. This ensures that the leader and the junior leaders have the same expectations of the job. Leaders actions such as given below demonstrate the leader's understanding of human behaviour and reinforce the value of the junior leader's job :—

- (a) Assign junior leaders to useful jobs and tasks.
- (b) Provide junior leaders with necessary guidance and assistance.
- (c) Rely on critical points of supervision and avoid over-supervision.
- (d) Show appreciation for junior leaders execution of task.
- (e) Provide recognition for outstanding performance.
- (f) Encourage innovations.
- (g) Avoid humiliation and group embarrassment.
- (h) Challenge junior leaders in accordance with their capabilities. They will generally live upto the leaders expectations. This will also fulfil their ego.

Leaders must be conscious of their junior leaders personal goals and make a deliberate effort to help them to attain the same.

#### PROFICIENCY

The ultimate aim of a leader's efforts is performance of junior leaders that leads to mission accomplishment. The junior leaders are inclined to perform those tasks which they feel they have ability to accomplish successfully. The leaders' responsibility therefore, is to improve the personal and professional ability of the junior leaders. This will open new horizons in the field of display of initiative by the junior leaders.

#### GUIDELINES FOR JUNIOR LEADERS

Junior leaders' task is to recognize responsibility to comply with orders of leaders and take appropriate action consistent with the situation to carry out those orders to the best of their ability. In the absence of such orders they estimate the proper action required to contribute to mission accomplishment and take that action. It is the later portion which is important and needs to be developed. The junior leader must be imbued with the spirit of personal commitment to the successful completion of his units' mission.

Junior leaders who have the same sense of mission accomplishment as their leaders, who are aware of and actively participate in their role as junior leaders, make leadership possible by taking appropriate actions on their own. Effective leadership requires junior



leaders who are more than pavlovian reactors to their leaders' influences. Some of the "Guidelines for Junior Leaders" developed by the Leadership Department, USAIS, several of which are the principles of leadership which equally apply to junior leaders are given below :—

- (a) Comply with orders and initiate appropriate action in the absence of orders.
- (b) Know yourself and seek self improvement.
- (c) Be technically and tactically proficient.
- (d) Develop a sense of responsibility and take responsibility for your actions.
- (e) Be familiar with your leader and anticipate his requirements.
- (f) Keep your leaders informed about actions taken.
- (g) Understand the task and ethically accomplish it.
- (h) Be a team member but not a 'Yes' man.

It is imperative that the junior leaders keep themselves informed about the prevalent simulated combat situations during training and make an effort as given below :—

- (a) Originating actions in a new situation.
- (b) Overcoming problems by taking a new and novel step.
- (c) Coping with a situation with persistence.
- (d) Willingness to take risks in new situations.
- (e) Launching a bold and resolute endeavour.
- (f) Display of persistent interest in accomplishment of unit mission.

Some of the measures mentioned in paragraph 31 above may be developed by imparting adventure training and assigning task oriented mission to junior leaders during training.

### CONCLUSION

The changing aspects of warfare which reflect the adaptation of armies to technology have resulted in the potential of vastly different battlefield from the days of muskets, sabers and horse drawn artillery. Increasing range, rates of fire, and lethality of weapons have spread out battle-field and have reposed more reliance on the functioning of junior leaders. The need to develop their initiative to cope with multifarious complex situations cannot be overemphasised. The spectrum of Leader—Junior Leader relationship must be critically studied. The answer lies in adapting informally operative Power—Responsibility approach by the leaders. Leaders must endeavour to attain high degree of skill and proficiency to be able to adopt this

approach. The junior leaders must be given task oriented missions which are complementary to the achievement of unit missions. The responsibilities given by leaders to junior leaders must be realistic. The junior leaders must be held accountable for the end results of their responsibilities but should be given as much latitude as possible in accomplishing those responsibilities. Laying down of rigid parameters and over-supervision on junior leaders must be avoided. A system of timely guidance and critical points of supervision may be adapted. All efforts be made to give sense of achievement aimed at satisfaction of junior leaders' ego. Adventure training aimed at creating diverse situations may be imparted to develop instinctive initiative and sharpen reaction of junior leaders.

## To be with General Cariappa

COLONEL CHANDRA B KHANDURI

I had hardly waited for over a minute in the elegantly furnished drawing room of Mrs Nalini Beg, the tall graceful daughter of Gen Cariappa at her Delhi house, when the General appeared at the door. Immaculately dressed in a three piece suit, the stately figure of the General strode in. The first impression and the lasting one, was of a one hundred percent General, a big man, born for big job. He walked slowly almost tip-toeing but erect.

"CBK, I presume" he said, extending his firm hand. He continued, "Good that you came ..... I have been rather unwell. Injuries of youth trouble one in old age.....". He has had serious injuries due to a fall from horse back. He then occupied a straight-back chair with an imperial dignity, reminiscent of the good old days.

Soon I came under a volley of intense personal questions on family, education, courses, the Regiment I belong, my battle experience and how life has generally treated me. He remarked that Gorkhas were excellent little fellows, 'braveles brave'. He quipped when I told him Bill slim his contemporary in the Army and in Australia was Colonel 1 GR. "Bill, the Mongol General", he chuckled.

We got to my mission. "I must warn you" he said rather in a low tone "by writing on me you may be wasting your effort..... Pick on some one whose biography people would care to read....." That, I conceded, was a modest approach of General Cariappa, who is known as Kippers to his friends and admirers.

I emphasised that my aim was to produce a definitive biographical work in due course and I had fixed my gauge at his role during the formative years of Indian Army. He looked reassured, affectionate and communicative.

"It was a very difficult task", he pondered "reorganising the Indian Army from the remnants of the Royal Indian Army, particularly when from the internal security duties of 1947, we got deployed in J & K till 1950. But we had able and dedicated officers like Thorat as my C G S..... He was just the best I had on staff".

On the Command side, he thought Kulwant, was OK, though impulsive. Thimayya proved an asset with his SRIDIV. He remembered the Northerly drive of the Harbax's Brigade to Thithwal and near sack of Thimayya on account of some unit abandoning their forward positions. He laughed when he said Timmy for once was pleading 'not to resign'.

He was of the view that British were gracious in handing over power; most of them were keen to stay on and serve under him including some of onetime seniors. On the reorganisation of the army laying the foundation of Indianisation while retaining the traditional values of soldiery-discipline, obedience, professional competence, maintaining an apolitic Army, he argued it was a great challenge of which he felt proud. "I hoped to carry my plans further but there came the inevitable age and at 54 I was out before I realised I had achieved anything". Those days the Chief retired at 54 unlike today's. I asked him why did he agree to reducing of salary of the officers? "There was a general reduction of pay of all classes of officers ICS, and others..... we were, and are a National Army, afterall.....".

He drifted to the political figures of those days..... Nehru, Patel, Azad and so on. Patel, according to Kippers, was the ablest statesman we had.....a man of steel nerves and indomitable will. His early death, he opined, was a national loss. Nehru was a visionary with intellectual discipline, who was learning his job.

Kippers has been writing extensively on military virtues of a nation, its youth, its Army. He has been critical of the trend set in the country which ignores the traditional and ethical values of the Indian Society. For the soldier, he is of firm opinion that discipline and morale formed the bed rock of the organisation. Do not ignore the soldier "he has been saying often. To me he quoted his saluting the soldier statuette—a symbol of the Indian soldier—religiously every morning from his days of C—in—C. The statuette adorns his drawing room now.

A very recent example would support his belief. Despite high morale of their officers, the Argentine still lost to the British in the Falkland campaign. The reason is simple to find. Their men, not being cared for, remained demoralised and surrendered at the first opportunity.

We were interrupted by an old officer who had brought his grand daughter to see the General, the first Commander-in-Chief of free India. Kippers changed his role to one of grandsire. The little girl

got some chocolates along with an autographed copy of his recent photo.

He was to be visited in my presence by an oldish woman whose husband, she claimed, was the Magistrate of Bannu in 1945, where Kipper commanded the Bannu Frontier Brigade. She wanted letters to the President and the Prime Minister. Those were drafted promptly.

Before we got on grid for further discussion he asked me if I wrote for the press. I couldn't, I explained under the rule. I couldn't. He carried on, ignoring my point. You should'nt till you are in service. They are difficult to handle". Kippers had difficult times when someone in March 1947 produced his article in a local paper and later in Australia as Indian Ambassador misquoted his observation on the Australian Emigration Policy.

Soon he got into lighter vein on some subject. In the course of conversation I told him how interesting I found going through his life long collections at the Archives. "You really have," he enquired which I confirmed including my having seen the exchange of his youthful notes with H. Blake on that "pretty nurse of Fatehgarh". That being, as it was, he, sprang to his feet, and in a surge of boyish playfulness punched me in the stomach a straight left over the laughter. The old man prayed how he wished that youth could return to him even for a few days, just for few days.

The time, the most inflexible commodity of life, seem to fly when Mrs Beg reminded us that few more visitors were outside.

We shook hands with a mutual promise to meet again, shortly either at Delhi or in Kodagu and, that, I would'nt mind being punched again.

As I reflect, my mind focusses on several facets of General Cariappa's life. For the present, the thought has struck about his secret of longevity. He has outlived much younger Generals Rajendra Sinh Ji, Muchhu Chowdry, Thapar, Tappy Raina to name just a few. It is perhaps his Spartan self discipline or natural health or both and a very satisfied life, which have added to his 84th year. As things are, Kippers should be with us at least a decade more. That's my wish and prayer.

## Bengal and the Dutch

LIEUT. GENERAL S. L. MENEZES

**I**N 1627 the Dutch Governor on the Coromandel Coast deputed some men to Bengal to establish a trading station there. For sometime it remained subordinate to the Coromandel establishment, but in view of its increasing importance the Dutch Government of Batavia created in 1655 a separate organisation known as the Directorate of Bengal. Already in 1653 the Dutch had established a settlement at Chinsura on the Hooghly.

Like the English and the French, the Dutch thus had considerable commercial transactions in Bengal. They secured farmans, parwanahs and agreements, from the Mughal imperial government, its provincial Viceroys and many local chiefs. They established factories within the Bengal Subah not only at important centres of commerce, such as Pipli, Balasore (both in the present day Orissa), Patna, Futwah, Dacca, Malda, Kalikapur near Cassimbazar, Chinsura and Baranagore (now part of the present Calcutta), and Jugdea or Luckipur, but also at some villages in the interior with the aim of collecting in sufficient quantities the various goods, required for their investments, from the original places of production.

Bernier (1665-66) mentions Dutch establishments in 'Bengale' (Bengal), or at Patna. Referring to Bengal as the "common store-house" for cotton and silk "not of Hindustan or the Empire of the Great Moghul only, but of all the neighbouring kingdoms and even of Europe", he observes, "I have been sometimes amazed at the vast quantity of cotton cloths, of every sort, fine and coarse, white and coloured which the Hollanders alone export to different places, especially to Japan and Europe... The Dutch have sometimes seven or eight hundred natives employed in their silk factory at Kassem-Bazar (Cassimbazar), where, in like manner, the English and other merchants employ a proportionate number". The Dutch also exported "a prodigious quantity" of saltpetre from Patna. Tavernier, who stayed at Patna for eight days (1665), writes: "The Dutch Company has an establishment there on account of the trade in saltpetre which it refines at a large village called Chapra, 10 coss above Patna". John Marshall (1662-72 A.D.) notes that the Dutch Factory at Cassimbazar, located at a distance of about one mile from the English

factory there, was 'very large' with 'handsome gardens belonging to it'. By 1676 the Dutch had abandoned their factory at Pipli and built a new one at Balasore. Under the Dutch Directorate of Bengal there were then six Dutch factories, viz. Chinsura, Cassimbazar, Balasore, Patna, Dacca and Malda.

The territorial property of the Dutch in Bengal was confined to Chinsura and Baranagore, which had been "obtained by gift or rather by possession" from the Nawab's government. Their Council at Chinsura was for all purpose subordinate to the authority of the Government at Batavia.

Separately, French trade in Bengal began to decline considerably since the forties of the eighteenth century owing to lack of funds and incompetence of the successors of Dupleix, who, after a successful career as Intendant of Chandernagore (or Chandannagar) had been transferred to Pondicherry in 1741. The Dutch had then "great trading interest" in the province. They claimed the 'premier rank' among the Europeans at the Murshidabad Darbar and the 'precedence of laying and removing the buoys at their pleasure' in the Hooghly river. The Dutch were, in fact, the principal commercial rivals of the English in Bengal during the decade from 1740. Naturally, there was keen competition between them in the matter of procuring suitable articles of export from the different manufacturing centres. In 1739 the members of the English factory at Patna had a bitter dispute with those of the Dutch factory regarding saltpetre "bought jointly which was seized by the Dutch with an armed force". The English Council in Calcutta complained to the Dutch Director at Hugli, who "promised to write strenuously to Patna". The demand for saltpetre as the principal ingredient in the manufacture of gunpowder had been gradually growing among the Europeans because of their wars. Eventually by 1758 Clive secured absolute control for the English East India Company over the saltpetre farms in Bihar from Nawab Mir Jafar.

After a French squadron had appeared off Negapatam on 9 June, 1748, and the English Calcutta Council had been informed of it: the Dutch at Hugli promised their assistance to the English. In reply to a letter from Mr. Barwell, the English Governor in Calcutta, Mr. Huyghens, the Dutch Director at Chinsura, observed that the Dutch Council had issued necessary "orders to bring their Company's ship up to Baranagore to be unloaded, from whence they will order her down to Calcutta to assist the English in case the French attacked that place, and that they were prepared to pass further orders for "all their expected Company's ships to be brought to Baranagore as

soon as they come into the river" (Hooghly), on the English Company giving him sufficient assurance that they would not admit into their service, or grant shelter to, any of the sailors or others who may desert the ships sent to help them but would deliver them up on demand.

Towards the end of 1748, the French forcibly occupied the Dutch Company's garden of Champonade, near Chandernagore. Mr. Huyghens immediately informed Mr. Barwell of this action on the part of the French, which, in his opinion, was against the principle of neutrality. At this the English Council in Calcutta authorised the President to report to the Nawab in a petition that the French had violated "the neutrality of the Ganges" which made them reasonably apprehend aggression on their part on themselves also. Mr. Huyghens also wrote a letter of remonstrance to M. Renault, the French Chief at Chandernagore, on 13 January 1749, against this aggressive behaviour of the French. The French Chief sent a reply to him to the effect, "Permit us to tell you that your protests do not appear to us well-founded. It is you gentlemen who were the first to have violated the neutrality by breaking with us all communication, a procedure which ought to have caused us all the more astonishment, as intercourse between our two establishments has never been interrupted even in times of war. The step which we have just taken is only too well justified by your conduct and by the situation of your garden so near our fortifications as to obstruct our passage".

1756-57 were crucial in the history of Bengal. The quarrel between its Nawab, Siraj-ud-daula, and the English East India Company created serious problems for all connected with Bengal in any way. Mir Jafar's treachery ultimately decreed in favour of the English on 23 June, 1757. The Dutch eventually found themselves in a dilemma.

Siraj-ud-daula initially sought to utilise the services of the Dutch, the French and the Danes in Bengal in his anti-English moves. He at first drew up parwanas for the three companies assuring them therein of his favour. On 26 May, 1756, he wrote to Khwajah Wajid from Rajmahal to deliver these parwanas and to "endeavour to engage these nations to prevent the English resettling themselves", after they had been driven out. Before marching towards Calcutta, the Nawab summoned the 'native' agents of the French and the Dutch at Cassimbazar to his darbar with a view to ascertaining from them what sort of assistance he might expect from their respective masters in his meditated expedition against the English. The Dutch agent instantly replied that his "Company was only mercantile, not



constituted for making war, and that at Chinsura there were not more than 10 guns and 50 soldiers including both whites and blacks." But on his way to Calcutta the Nawab sent parwanas to the Dutch, the French and the Danes "to be expeditious in getting their vessels of force in readiness to accompany" his "land army and attack the English by the river while he besieged them on shore." The Dutch did not evidently comply with the Nawab's demand, which had the effect of highly exasperating him.

When after storming the English Factory at Cassimbazar, Siraj-ud-daula commenced his march on 5 June, 1756, for the attack on Calcutta, the English in Calcutta appealed to the Dutch at Chinsura for help against the Nawab. The former argued that they were entitled to receive it according to the terms of the treaty subsisting between the Governments of England and the Netherlands. ".....we have, therefore, considered it our duty to point out to your Honour and the Council", wrote the President of the English Council in Calcutta to the Dutch Director at Hugli on 7 June, 1756, "the danger that lies in allowing such an insult to one of the European nations settled here to pass unheeded, and request for the sake of our King, and by virtue of the treaty of alliance existing between us, that should we be attacked, you will as far possible render us every aid and assistance in our power". On the next day, the Dutch sent a negative reply.

Disappointed at what the English in Calcutta regarded as the "cool and indifferent" attitude of the Dutch Council, they protested against it in strong terms in a letter dated 13 June. They even suggested the formation of a "triple alliance" among the three European Companies in Bengal against the Nawab. In reply to this the Dutch Council observed that the engagements between Britain and their country did not "extend to the colonies here in India", and that, in view of the critical situation in which they had been then placed, their combination with them against the Nawab would be a 'perilous undertaking' on their part. They also pleaded that their masters in Holland and at Batavia had prescribed to them "a strict maintenance of neutrality in all cases that relate in any way to the native Government".

The capture of Calcutta by Siraj-ud-daula within a few days caused embarrassment to the English East India Company in Bengal. However, there was a new turn in Bengal affairs after the arrival there of Admiral Watson and Colonel Clive. Reaching Culpee (Kalpi) on 13 December, 1756, Admiral Watson sent a note of warning to the Dutch Director, Mr. Bisdorn, on the next day. Referring to the

Admiral's warning against extending assistance to the Nawab, the Dutch Director observed in reply that he knew his "duty too well to enter into a course of action contrary thereto" even if that exposed him to the Nawab's 'fury'. Immediately after the recovery of Calcutta by the English, the Dutch Director hastened to congratulate Admiral Watson. The Dutch found themselves placed in a delicate situation during the British siege and capture of the French settlement of Chandernagore (14-23 March). Their active participation in affairs connected with this incident was out of the question because of their weak position, of which they were fully conscious. ".....our Fort is a nest", observed the Dutch Council at Hugli on 2 April, 1757, "that would not be able to withstand the onslaught of enemy for as many hours as the French have days, and now the English have destroyed the imaginary neutrality within the Ganges, the stronger party will, in the future, no doubt always assail and ruin the weaker unless the parties at variance can find a means to reconcile their clashing interests". Owing to the proximity of their settlement to Chandernagore, they naturally apprehended prejudicial affect of what was happening there on themselves. To obviate that they considered observance of perfect neutrality to be the safest course for them, and tried to satisfy the Nawab as well as the English. Many French fugitives from the besieged Chandernagore took shelter with the Dutch at Chinsura and Hugli. On Colonel Clive's demand for their delivery Mr. Bisdom asked them to quit 'Dutch territory'.

French influence in Bengal had been shattered irretrievably in March, 1757, and its quick decline in other parts of India came almost as an inevitable corollary to the changes that took place in Bengal in the course of a few months. Siraj-ud-daula's star had begun to fall, and Plassey sealed his fate. The English, who were the principal actors in the drama that was then staged on the political chess-board of Bengal, found their position improved.

The Dutch grew jealous of consequent English ascendancy in Bengal, and even challenged it in the course of the next two years and a half. They at first hesitated to recognise Mir Jafar as the Nawab of Bengal, and some of them at Chinsura did not even salute him. When he had passed through that place on his way to Calcutta. Mir Jafar there-upon imposed some restrictions on their trade, which were not removed till they apologised for their conduct. There could not be, however, any doubt about the Dutch menace to the English in Bengal at that time. In July, 1759 there was a rumour in Calcutta that the Dutch Government at Batavia had been fitting out a strong vessel, which was destined for Bengal. Early in August,

the arrival of a Dutch vessel in the Ganga, carrying on board a number of Dutch and Melay troops, gave some support to the rumour.

Again, early in October, six of seven Dutch vessels, full of European as well as Malay troops, arrived at the mouth of the river. Mir Jafar, who had then come to Calcutta on a visit to Colonel Clive, was greatly disconcerted on receiving this news. Determined to strike a blow against the English, the Dutch moved up the river with their vessels and engaged themselves in enlisting sepoys at Chinsura, Cassimbazar and Patna. The Dutch vessels carried 700 European infantry and 800 Malay soldiers to act in combination with the Dutch garrison at Chinsura, consisting of about 150 Europeans including artillery and a large number of sepoys. The English force consisted of 250 European infantry, a company of about 80 strong artillery with lascars attached and about 1,200 sepoys. A party of European infantry and 500 sepoys of the English were at Patna; a part of the battalion and a number of sepoys were stationed at Midnapore to oppose the incursion of the Marathas, and some detachments of sepoys were stationed at Chittagong, Dacca, Murshedabad and Burdwan. All were ordered to come back to Calcutta, and the militia of Calcutta, composed of the English, Armenian and Portugues inhabitants, were charged with the defence of the Fort and the town. "The only vessels in the river were three Indiamen, the 'Duke of Dorset' of 544 tons, 'the Calcutta' of 761 tons, and 'the Hardwicke' of 573 tons, with 'the Leopard Snow' and a small ship under Captain Barclay. The latter vessel was immediately sent off with an express to Admiral Cornish, then cruising on the Arracan coast, requesting immediate assistance".

Colonel Clive ordered the three Indiamen to proceed to the defence of the town, and the detachments at Tannah's Fort (the present Botanical Gardens, five miles below Calcutta on the right bank of the Hooghly river) and Charnock's Battery (nearly opposite Tannah's Fort) were strengthened. Colonel Forde, Clive's "right hand man" at Plassey and later, who had at the time returned from Masulipatam to Bengal, took up the command of the entire body of troops. He wrote to the Nawab in peremptory terms to send his son Miran with an army to invest the Dutch at Chinsura, but was not listened to.

The Dutch now remonstrated against the actions of the English in searching their boats and obstructing the advance of their troops up the river, and threatened them with immediate and full revenge if they persisted in doing so. The English replied that "they (the English) had given no insult to their (Dutch) colours, or attacked or

touched their property or infringed their privileges; that with respect to their (Dutch) bringing troops into Bengal, the Nabob knew best how far it was incumbent on him to preserve the peace and tranquility of his country; that their (Dutch) boats had been stopped and searched, and the advance of their troops opposed, by orders from the (Mughal) Viceroy, and under the (Mughal) Emperor his master's colours, and by his troops: that they must apply therefore to him".

This enraged the Dutch, who commenced hostilities by capturing seven English vessels including the 'Leopard Snow' and Captain Barclay', tearing down English colours, disembarking their guns, military stores, etc., from their ships, and making prisoners of their Captains and crews. At Fulta and Raipore they tore down English flags and burnt the houses and effects of the English Company's tenants. Clive informed the Nawab that these acts of violence on the part of the Dutch meant nothing short of their commencing "actual war against the English," that "he (Nawab) should leave chastising the Dutch" to the English and "desist from sending either his son or any part of his army to their assistance", but that, if he desired to convince the English of his sincerity, "he should directly surround their subordinates, and distress them in the country to the utmost." The Dutch, on their part, described the English as the aggressors and solicited Mir Jafar's favour.

In view of the gravity of the situation Clive took upon himself the responsibility of ordering hostile action against a nation with whom his own country was then at peace in Europe. He subsequently told the Select Committee of the House of Commons that "he was sensible how very critical his situation was at that time; that he risked his life and fortune in taking upon himself to commence hostilities against a nation, with whom we were at peace; but that he knew the fate of Bengal and of the Company depended upon it."

According to Clive's instructions, Forde started from Calcutta on 16 November with a strong detachment to capture the Dutch factory at Baranagore. On 20 November 1759, Forde seized the Dutch factory at Baranagore and "passed over the river with the troops and four field artillery to Serampore, the Danish factory, and marched towards Chandernagore; not only with a view of striking terror into Chinsura, but to be ready to intercept the Dutch troops in case they should disembark, and attempt to gain that place by land." On 22 or 23 November, the Dutch landed on the western bank 700 Europeans and about 800 Malay soldiers. On the same day Colonel Clive sent orders to Commodore Wilson to demand of the Dutch immediate

restitution of their ships, subjects and property or "to fight, sink, burn and destroy the Dutch ships on their refusal." The demand was made but was not complied with. The English fleet, thereupon, attacked the Dutch, notwithstanding the inferiority of their own vessels (the Dutch having seven ships). After two hours fighting, the Dutch Commodore struck his flag, and all the other vessels except one, followed his example; the one exception was shortly after captured. On this occasion, the Dutch lost more than 100 men; on board the Dutch Commodore's ship, upwards of 30 men were killed and double that number wounded.

At the same time, Colonel Forde, while marching through Chandernagore, was attacked by a Dutch force from Chinsura of 720 Europeans and 300 sepoys, which had taken up a position amidst the ruined buildings of Chandernagore with four artillery pieces. He drove them from this position, captured their cannon and chased them up to Chinsura. In the evening, he was joined by the troops from the Charnock's and Tannah batteries. He received intelligence that the Dutch troops from the ships, joined by a part of the garrison from Chinsura, were advancing, and immediately resolved to attack them on the plains of Bedara, about four miles from Chinsura. He wrote to Clive for explicit official confirmation regarding his suggested course of action. Clive was then engaged in playing cards, and without leaving the table, wrote an answer on the back of the letter in pencil, "Dear Forde, Fight them immediately, I will send you the Order of Council tomorrow." On receipt of this permission, early in the morning of 25 November, he marched at once with two field-pieces and met the Dutch on the plains of Bedara (midway between Chandernagore and Chinsura). Thus ensued on the soil of Bengal a contest between two rival European powers, which has been described by Clive, "The Dutch were commanded by Colonel Roussel, a French soldier of fortune. They consisted of nearly seven hundred Europeans, and as many buggoses, besides country troops; ours of two hundred and forty infantry and eighty of the train, and fifty more Europeans composing the troops of horses, independents and volunteers, and about eight hundred sepoys. The engagement was short, bloody, and decisive. The Dutch were put to a total rout in less than half an hour: they had about one hundred and twenty Europeans, and two hundred buggoses killed, three hundred and fifty Europeans and about one hundred and fifty wounded. Our loss was inconsiderable." After this action, Colonel Forde returned, sat down before Chinsura and wrote for further orders. "The Dutch were now as abject in their submission as they had been insolent in their supposed superiority."

They wrote to Colonel Forde and also to the Council in Calcutta soliciting cessation of hostilities and with proposals for amity.

The English responded to the request of the vanquished Dutch. On 3 December, 1759, the Dutch "disavowed the proceedings of their ships below, acknowledged themselves the aggressors, and agreed to pay costs and damages", whilst the English agreed that "these terms being fulfilled, they would restore the ships, stores and prisoners they had captured, except those of the latter, who desired to enter their service."

Three days after the battle of Bedara, the Dutch had to face a new danger. Miran, Mir Jafar's son, marched from Murshidabad with 6-7000 horse and encamped within two miles of Chinsura, avowedly to exterminate the Dutch as they had disturbed the peace in Bengal. The Dutch implored British protection. Clive now "displayed", as Malleson notes, "a mastery of statesmanship, the greater as it bore the appearance of signal generosity." By timely intervention on behalf of the Dutch he effected an accommodation between them and Miran. Miran forgave the Dutch and promised protection to their trade and privileges on the terms, that "they shall never meditate war, introduce or enlist troops, or raise fortifications in the country; that they shall be allowed to keep up one hundred and twenty-five European soldiers, and no more, for the service of their factories of Chinsura, Cassimbazar, and Patna; that they shall forthwith send their ships and remaining troops out of country; and that violation of any one of these articles will subject them to utter expulsion."

Thus the "attempts of the Dutch to rival the political power of the English in Bengal" ended. Bedara "decisively foiled", remarks Malleson, "the attempt to establish an Indo-Batavian empire." Politically it dealt a crushing blow to Dutch aspirations, and the position of the Dutch became dependent on the goodwill of their erstwhile enemy, the English East India Company. Further, their commerce which had been previously 'very profitable, now ceased to be so'. The Dutch traveller, Stavorinus, who visited Bengal during 1769-71 A.D. writes, "Since the unfortunate issue of our expedition to Bengal in 1759, the reputation of our countrymen has been on the decline; and we are obliged to be not a little dependent upon the English, with respect to the piece-goods wanted for our cargoes, both Batavia and for Holland." As for the English, the defeat and humiliation of the Dutch relieved them of a threat. "Thus ended an affair", observed Clive, "which, had the event been different,

threatened us in its consequences with utter destruction.....". Bedara supplemented Plassey, and considerably added to British influence in Bengal. Brome remarks, "Such was the brilliant victory of Bedarraha marked by an extraordinary degree of skill and courage, and most important in its results."

Thereafter the years 1778-83 formed a critical period for the British in different theatres. England was then confronted not only with the revolt of the American colonies, but also with a coalition of her foes in Europe. These events had undoubted repercussions on contemporary Indian events. The friendship of France with Hyder and Tipu, the inveterate foes of the English in India, made the situation here also critical for the British. British reprisals were, therefore, directed against the hostile powers in all theatres of their activities, including India.

In the autumn of 1780, the United Netherlands joined the league against England in the course of the American War of Independence. This was followed by a declaration of war by England against the Dutch on 20 December, 1780. The Dutch settlements in Bengal and Bihar were captured by the English in 1781.

The year 1783 marked the close of a period of acute international rivalries among the Western powers. A treaty of peace and friendship between England and France was signed at Versailles on 3 September 1783, which was soon followed by restitution of conquests by the English, the French and the Dutch.

The next major chronological development was that France declared war against England and Holland on the 1 February, 1793. The French overran Holland and a Batavian Republic dependent on France was declared. The British thereupon took the Dutch settlements in India, under their "protection" in 1795.

During the Governor-Generalship of Lord Minto the important Dutch possessions of Moluccas (1810) and Java as well as its dependencies (August, 1811) were captured by the British Indian Government. "An Empire", as Auber observes, "which for two centuries had contributed to the power, prosperity and grandeur of one of the principal and most respected states of Europe was wrested from the short usurpation of the French Government, added to the dominions of the British Crown, and converted from a seat of hostile machinations and commercial competition, into an augmentation of British power and prosperity." In October, 1811, Thomas Stamford Bingley Raffles was appointed "provisional" Governor of Java.

It was eventually during the administration of Lord Amherst that the British in India came to an agreement providing for mutual

exchange of settlements in the East. The English thereby obtained some territorial possessions of value in strengthening the edifice of the British Empire in the East. On 17 March, 1824, a treaty was signed at London between the British Government and the Government of the Netherlands with a view, as they declared, "to place upon a footing mutually beneficial to their respective possessions and the commerce of their subjects in the East Indies so that the welfare and prosperity of both Nations may be promoted in all time to come, without those differences and jealousies which have, in former times, interrupted the Harmony which ought always to subsist between them, and being anxious that all occasions of misunderstanding between their respective agents way be, as much as possible, prevented.....".

The important terms of the treaty were as follows :-

"Article 8 —His Netherlands Majesty cedes to His Britannic Majesty all establishmentf on the continent of India, and renounces all privileges and exemption enjoyed or claimed in virtue of those establishments.

"Article 9 —The factory of Fort Marlborough, all the English possessions on the island of Sumatra are hereby ceded to His Netherlands Majesty; and His Britannic Majesty further engages that no British settlement shall be formed on that island, nor any treaty concluded by the British Authority with the native Prince, chief or state therein.

Article 10 —Town and port of Malacca and dependencies ceded to His Britannic Majesty.

Article 11 —His Britannic Majesty withdraws objection to the occupation of the Island of Billiton and dependencies by agents of the Netherlands Government.

Article 12 —His Netherlands Majesty withdraws objection to the occupation of the Island of Singapore by subjects of His Britannic Majesty. No British establishment to be made on the Corimon island and the island of Baltam, Bintang, or other islands.

Article 13 —Delivery of all possessions on the 1st March, 1825.

Article 14 —Inhabitants for 6 years of the date of notification of the Treaty may dispose of property as they like."

Instructions were sequentially issued, on 13 January, 1825, to the Magistrates and the Collectors of Hugli, Murshedabad, Dacca, Patna, Cuttack, and the Twenty four Parganas appointing them Commissioners to take charge respectively of 'The Town and Territory of Chinsura', and the Dutch factories and possessions at Kalikapur (near Cassimbazar in the Murshidabad District), at Dacca, at Patna, at Balasore and at Fultah. Thus ended the Dutch connection with Bengal,



# Mobility Reduction Through Mines : A Technological Tactical, Cum Systems Review

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## INTRODUCTION

ORIGINALLY this review, in abridged form, had been prepared for dissemination to the Technical Staff Course Examination Correspondence course. To increase its scope, and to reach an enlarged professional readership, some members of which may find interest in the subject, it was felt better to publish it through this forum.

Techniques of mobility enhancement of late have improved tremendously in most modern armies. Through a process of gradual development of technology, we have now to contend with extensively mobile forces the like of which have not been seen earlier. One effect of having these forces on the battlefield is the loss of security of land. The land may be a key industrial belt, a valuable agricultural resource, a stepping stone for further seizure, or an important one for negotiation. Whichever way it goes the populace is put up to much hardship. As a consequence there are problems of trade-off during negotiations, and this may be politically unacceptable to the national leadership.

In the past decade or two, this vexing problem has been considerably solved by creation of artificial barriers to mobility with fortifications manned by skilled personnel stretched laterally, virtually to the limit of their tactical capability, sometimes with discrete but innocuous looking gaps in between. Tactical plans, pragmatically, have also been modelled to consider introgression at some places and reactive plans are also in store. This is very well as far as it goes. However, with a changing equipment and technology state, a revaluation may be opportune.

## THE SCENARIO OF EXTENSIVE MANOEUVRE AND ENHANCED MOBILITY

Of prime concern to us is the thwarting of ingress into our territory. Thereafter we tackle the reduction of ingress, its contain-

ment and lastly its elimination. In a highly mobile scenario, thwarting has its limitations. It calls for high defence potential, a commensurate force potential, and an even higher demand on force effectiveness—matters which have already been subject to prolonged and tedious examination. The other three concerns have a predominant stress on mobility, the reduction of which, either wholly or selectively, could play an important part in mission effectiveness.

Higher mobility has been a gift of higher technology largely consequent to heavy funding of research and development. While armour, personnel carriers, weapons carriers, communication equipment carriers and logistic support vehicles have enhanced in ground mobility by way of incorporation of robust power packs, higher power to weight ratios, and reduced nominal ground pressures, analysis of terrain with the help of aircraft and satellites have endowed commanders with access to more reliable information, thus enhancing their capability to grasp ground conditions and enabling them to model their plans on a firmer basis. The use of helicopters, paratroopers, air and sea landed troops, and amphibious vehicles has also contributed in no small measure. This has led to greater fluidity and liberty, and to counter it, it is desirable to congeal potentially eruptive situations within governable limits. Let us firstly examine the state of the art.

#### MINELAYING

Mines have always played an important part in mobility reduction. They have also sometimes been a source of unexpressed dissatisfaction to commanders, as they sometimes fell short in numbers, or at others, the time available to lay was inadequate. Even more difficult was the predicament of the layers who have sometimes had to selflessly contribute to overall defences without any assurance of having their own completed to satisfaction in time.

The first concern, therefore, is one of adequacy of numbers within a time constraint—the singular purpose being to restrict movement in particular geographical locations so as to regulate it. This is done by inhibiting or negating ingress or egress and eventually would set the mechanism in operation for further defensive or offensive planning—many of the operations, of course, being run concurrently.

In most countries, the present system of minelaying principally has a bias towards use of manual labour. Carefully prepared and approved plans are unveiled to eager commanders and passed down to highly motivated functionaries, enthusiastic to carry out their task. They uncover the packed equipment, skilfully dig a hole, place the weapon,

cover it artfully, and continue a repeat with the next mine. This tedium continues till either the mines finish, or the task finishes or till it gets quite late. Various empirical rules are applied in planning how many mines can be laid, and they have all been subjected to the rigours of sand model discussions, where the zealous ones have discreetly made it known that they can easily do twice the number with their troops, while other pragmatists have given a conservative figure and sometimes painfully had to follow it up with elaboration of their professional competence. In any case, some planning figures have finally found acceptability and needless to say, the indications of time and capacity to lay are not suited to a scenario of higher technology warfare where greater speed and tactical flexibility are required.

The problem has somewhat been tackled with mechanisation. Mechanised laying offers significant gains in speed of laying. However, the concept being largely incontrovertible, the form taken at present requires refinement. A lot is dependent upon the tractor, terrain undulations, and concealment—all of which may not be overwhelmingly in favour of this method. Most armies of developed nations have within the past two decades, gone in for mechanised laying in a big way and are in transition to other forms. While the earlier mechanised minelayers used chutes to lay mines and generally involved the digging of a small channel for mines by a towing or carrying vehicle, emphasis on concealment has been discarded with the advent of scatterable mines. Examples of this category are the MSM/FZ (Minenstren mittel) minelayer (WG), the Bar Mine system and the EMI Ranger Anti Personnel Mine System (UK), the Mísar SY-TT Trailer Mounted Anti Tank and Anti Personnel mine scattering system, the GEMSS XM 128 Vehicle Towed Mine Dispenser (US), the M 57 Anti Tank Mine Dispensing System (US) the ARE Plough (Type Towed Minelayer and the Matenín Mine Burier (SP)—both of France, the MLG-60 Towed Mechanical Mine-layer (GDR), the FFV Towed Minelayer (Sweden) and the GMZ Tracked Minelayer (Which has replaced the older PMR-2 and PMR-3) (USSR).

Mechanised laying essentially presupposes uninterfered control of the territory in which it is being laid, as also protection against aerial attack. In fluid situations where control of both ground and air are indefinite, as in mobile operations, loss of minelaying equipment may be unacceptable. In such situation, resort is taken to laying by aircraft or guns. Whereas in the former, air protection is desirable, in the latter it is less material. Minelaying by helicopter is easy, quick, accurate and the most effective of all means available presently. It can be used easily to seal off an area not readily accessible by

ground or artillery. In addition it can provide an accurate photographic record of the sowing results which may be further used for manoeuvre. Examples of this system are MSM-HS Minelayer mounted on UH-ID or UH-IH helicopter (WG), Valsella VS/MD helicopter mounted minelaying system (Italy), Technovar DAT mine laying system (US), and MI-4 and MI-8 Anti Tank Minelaying helicopters (USSR). (Volume of laying in depth areas can also be increased with the help of fixed wing aircraft. The GATOR system (US) travels at 700 to 800 Knots at a height of 60 metres into the second echelon areas and delivers 600 mines over an area 200 metres  $\times$  300 metres.

Laying by guns, is advantageous in its remoteness and relative insulation from the very forward air situation, but may suffer from inherent drawbacks largely due to low range, low rate of delivery and the need for observation—mainly air. With greater perfection being achieved now, viz longer range and mass fire, this system is getting increasingly popular. Units in this system are the 110 mm Light artillery rocket system (WG), the 155 mm RAAMS (US), the 240 mm BM 27 MRL (USSR) (possibly) and the MLRS (US) (under development).

#### MINES

Numerous varieties of mines have been made in the past and newer ones are currently under development. Trends in certain key characteristics are described below :-

(a) Lethality. Lethality in anti-personnel mines is controlled primarily by controlling the fragmentation, improving the dispersion pattern, controlling the height of burst, shape, size and weight of fragments, their initial velocity and tumble. Investigations have proved that spherical balls, though ideal from the ballistic point of view and perforating efficiency of the fragments, inflict, despite their high energy, only light wounds to the human body. Consequently, it has been found that the best shape of the splinter is a pseudo-cubical body with sharp or jagged edges. As a result most mines are either pre-fragmented (*e.g.* Arges SpM 75) or prenotched (*e.g.* PRB 413).

In anti-tank mines, for apparent reasons, the charge effect has come to stay. The Czech Plate charge Anti Tank Mine (similar to the Soviet TMK-2) uses the plate charge effect, whereas the shaped charge effect is utilised in Anti Tank Mine type HPD (France), and 1953 and 1954 models, anti tank shaped charge Mine (France), MIACAH and AT-2 (US).

(b) Versatility. Efforts are also being made to use the same mine for different purposes. SUMMADE (System Universal Modular Mine and Demolition Explosives—Belgium) uses PRB 410 as a

demolition charge and when modified to PRB 408 as an anti tank mine. China's No 4 Dual Purpose mine can be used both against troops and armoured vehicles.

Some efforts have also been made to allow water tightness. The PRBM 35 Anti Personnel Mine and the PRBM 3 anti tank mine (both Belgium) are examples of these.

(c) *Attitude and Inclination.* Lethality, when plotted against height of burst results in a dome shaped curve, whose optimum in specific cases may be between 1 and 3 metres height. This has resulted in stake or picket mounted mines and bounding mines. In the former we have PRB 413, PP-MI-SB anti personnel mine (Belgium) and MK 61 and MK 63 and Anti Personnel Mines (France). In the latter we have the Arges Anti Personnel Bounding Mine SpM 75, the PP-Mi-Sr Bounding Anti Personnel mine (Czech), the Anti Personnel Bounding Mine model 1951/1955 (France), the DM 31 Anti Personnel Bounding Mine (WG) and the Valmara 69 Anti Personnel Bounding mine amongst others..

Another development is in directional mines, used mainly for area protection of emplacements or directional attack on vehicles. In this category are the MAPED FI Anti Personnel Mine (France), MIACAH, IRMAH type FI (France), the M 18 Claymore (US), and the FFV 013 Anti Personnel Mine (Sweden). Anti helicopter mines are in the concept stage as yet, and may join this category eventually.

(d) *Materials and Appearance.* Various colours are available to allow mines to blend with the background. The Valsella VS 50 Anti Personnel scatter drop mine is made of plastic and is available in Khaki, Marshy green and sand coloured shades. The PRB M3 Anti Tank Mine (Belgium) is made of drab olive polythene with the top surface of ammonia free bakelite seating. The only metal parts are steel strikers and aluminium primer caps; the PP-Mi-Sb Anti Personnel stake mine (Czech) has a body of concrete with steel scrap fragments within; the M 49 Anti Personnel Mine (Hungary) is completely wooden, and the DM-11 Anti Tank Mine (WG) is made entirely of explosive mixed with 5% polyester resin. The non-metallic nature of many mines makes them extremely difficult to detect with common mine detectors.

(c) *Arming, Actuation and Disarming.* Mechanical actuation in many cases is giving way to electronic, seismic or magnetic actuation. Moreover, delayed actuation and double influence features are also noticeable. In some cases battery operation has been resorted to. Another recent trend is the incorporation of anti-removal, self destruct, self neutralising, and controlled arming/disarming features.

The IRMAN Type FI (France) uses an infra-red sensor; and Anti Tank Mine Type HPD (France) uses double influence (Seismic and magnetic) ignition and has a self destruct or self neutralisation device; FF VO 28 (Sweden) uses double influence

and double charge; Models 1953 and 1954 Anti Tank Shaped Charge mine (France) use two slim shaped anti tank grenades joined together with detonating cord giving half a second delay; Anti Tank Mine Model 1952 MACI (France) uses a rod which actuates on tilting; the HPD-1A (France) uses two rechargeable lithium batteries; Technover TCE/6 Electronic Anti Tank mine is activated by pressure and has an electronic arming device for activation and deactivation; and the Misar SB-81 scatter dropped Anti Tank Mine has an electronic anti-removal and destruction/neutralising device.

All these key characteristics, as we see, are showing a departure from the older, simplistic mines, and the use of these newer mines with their inbuilt sophistication tends to endow commanders with greater potential. This has had a significant effect on mobile warfare. Some of the effects are discussed below.

#### EFFECTS OF NEWER DEVELOPMENTS

The principal departure from the older situation has been in the scale and rate of laying. Whereas earlier, considerably more time was available, and the pace of laying slow, the scale of minelaying operations was smaller. In a much more dynamic situation, a low laying rate is disastrous, and small scale laying ineffectual. Taking a holistic view, the entire resources at the disposal of a commander including mines must come into operation speedily, and in unison, to provide mass, momentum and precision in an area of choice. One effect of these developments is that the commander now has another valuable instrument at his disposal, enhanced in effectiveness, the operational application of which requires detailed thought, nimbleness, and speedy response.

Improved terminal effectiveness has also been achieved by these developments. While in anti-personnel mines the object has become one of incapacitation, resulting in a greater logistic burden on the enemy, in anti tank mines, delayed actuation, double influence and double charging have enhanced the damaging potential of mines. This has made mines a more viable device for attrition than earlier.

While detection of mines, especially the scattered variety, has been made easier, their removal or avoidance is fraught with problems. This is, firstly, due to anti-removal devices provided with mines which hinder speedy removal, and secondly, because the spatial positioning of a sequestered, near enclosed force with a closing in opponent contemplating precipitate action in a manoeuvre battle would not allow a significant amount of unobstructed minebreaching, scouting or reconnaissance to take place.

Selective movement is another prominent asset with the newer systems. Electronic arming and disarming facilitates innumerable movement options at the disposal of the layer. Timing and direction of movement may be chosen at will, while denying it to an entrapped opponent. The uncertainty of direction of attack and the state of arming of a minefield could prove extremely enigmatic to an adversary struggling with negligible options of egress available to him. Consequently it would be increasingly possible to achieve success by conducting a phased attrition series on an aggressor sequentially and conjointly with other means at his disposal, by a disparate, numerically inferior defender.

Another advantage is one of lowered costs. These mines, being scatter-dropped and easily disarmable by the layer, result in almost full retrieval. This results in low long-term costs, both financial, and those due to undesirable civilian and military casualties in peace. Also these mines usually relieve other active force means to perform the same tasks at lower equipment and trained manpower losses, thereby proving to be a cheaper alternative. An additional spin-off (purely situational) is the moderate scale restoration of vehicles that have suffered mobility kills due to mines.

#### OPERATIONAL WORKING OF A MOBILITY CONTROL SYSTEM

Although we are limited to mobility reduction through the use of mines, the discussion cannot do justice without a brief glance at the influential parameters of a larger system.

A battlefield mobility control system is a part of the larger force operation system, their interconnection and interplay being characterised by a dynamic and interdependent relationship. Planning for force movement must consider amongst other things, the intrinsic mobility of the force, mobility impediments, mobility enhancers, defences, fortifications, terrain layout, inundatable areas, obstacles, weather and trafficability. In an unconventional scenario the consideration of centres, extent, and degree of contamination and decontamination is also material. And in a transitional situation whose comprehension requires detailed minute by minute appraisal, planning and direction has to be markedly sensitive to parametric and situational variables, continuous, and more importantly, unfailingly expeditious.

Central to the system is singularity of command. The overall mobile force commander is the head of the mobility control system for reasons well understood. Examining battlefield mobility decision

making we are led to conclude that heavy dependance has hithertofore been laid on experience and experimentation. While for the former, arms advisors are used, the latter relies on preliminary reconnaissance. Although experience and experimentation are old and well tried methods, they suffer from limitations of slowness, play-safe advice, variable advice from different advisors, limited ability to predict, and sub optional siezure of limited mobility opportunities. Weightage change in experience, experimentation, and evaluation can be indicative of the quality of decision making. While at present we can say a weightage of 3 is being given to experience, 2 to experimentation and 1 to evaluation, a change of this *ie* (2 to experience, 2 to experimentation and 2 to evaluation) would render a qualitative change. In a way it would mean that less is left to personal factors, and higher dependance is made an analysis based on quantitative and more certain techniques which have now become commonly available. With gradual transition into high technology with complex dynamic phenomenal changes occuring with incessant and irregular rapidity, the field of battlefield mobility control is emerging as a sector of specialisation. The incorporation of whole-time specialists implies some amount of delegation. Firstly, because of the periodic and complicated nature of the job, and secondly, to relieve a fatigued commander of trivial intricacies, the attendance to which will distract him from applying himself to issue of immediate importance.

Delegation having been carried out, to say, a battle field mobility control advisor and coordinator (let us call him BMCAC for convenience. A slight clarification here. It is noticeable that this distinct from and supplemental to non-battle field logistics functions generally allocated to Q), it is essential that the BMCAC be a specialist in his line. This facilitates higher quality advice, planning, coordination and control. Important distinguishing characteristics required must be firstly, an ability to evaluate terrain from ground, air, and photographs and relate it to the intrinsic mobility of all the equipment present in the force. Secondly, on ability to transfer all information available on terrain, location of troops, obstacles, non-negotiable or contaminated areas on to a data display for easy access by the commander, other staff, concerned subordinate, or follow through units. Thirdly, to evaluate existing intrinsic equipment, ground, water and air mobility available, with the terrain, and identify multiple viable options creatable with the new minelaying technology. Fourthly, to coalesce mine based mobility retardants with other active retardants available in the other arms and forces and suggest as close an optimal solution as possible. And lastly, an ability to recommend



long term mobility requirements such as nominal ground pressure, acceleration capability, power to weight ratio, ground clearance and slope negotiability, particularly suitable to the terrain in question for the entire spectrum of mobile equipment, for eventual incorporation in equipment qualitative requirements.

As of today, many of such specialists could be drawn from the Corps of Engineers—the subjects of survey, photogrammetry, soil study, terrain evaluation, bridges, roads and airfield construction, electronics, advanced time planning and programming techniques, computers, and tactics having already been covered and being allied to the job. However, the incorporation of such whole time specialists, say in a Division, would call for the institution, compelled by circumstances, of a BMCAC in some form or the other supported by his staff as well as the continuance of an engineer executive in the field. In the longer run, battlefield mobility control specialists could be drawn from other arms and services also, and inducted after adequate exposure to an appropriate training schedule.

Integration and synthesis are achieved in the common manner. Similiar to the making of an artillery fire plan, the battlefield mobility plan must be tailored and repeatedly updated to suit the tactical plan of the commander and the changing situation—the details having been worked out by the BMCAC. When the latter is asked to prepare the battlefield mobility plan, synthesis is achieved by having it approved by the commander. Of prime importance is the integration of the battlefield mobility plan with the combat forces tactical plan, the fire plan, the communications plan and the logistics plan. Coordination is achieved by repeated interaction of advisors. Control is achieved by vesting over-riding powers of control of movement in the BMCAC. At regular intervals, reference is made to the data display of the terrain and its mobility inhibitors. Besides reducing battle field clutter, this prevents avoidable casualties by way of ingress into minefields, poorly negotiable or non-negotiable areas, areas under planning for strike or sowing, and possibly contaminated zones. Reply to any reference is usually instantaneous. Of major importance in the system is a sound communication network, digitalised position reporting and integration of all available communication and information sources. Secrecy and security of communication are proved by digitalisation, frequency and time division multiple access techniques, encoding, encryption, and built in redundancy.

To reach a markedly refined degree of operational perfection in battlefield mobility control, it may take a decade or so, as much of the

wherewithal is still to be accepted, while production, procurement, and provisioning should take longer. As an initial measure, concurrent planning and implementation could be commenced so that infrastructural built up, technique perfection, operational testing and modifications could be done to affect as smooth a development as possible. Present day functioning could be improved perceptibly optimising usage of available means to provide immediate gains.

Part of the infrastructure is already present as a more or less indistinct, fractionated agglomeration in most armies of the world. The existence of surveyors draughtsmen, air photo analysts, operations, Q and I staff, a set of procedures with checks and overlaps, and a responsive communication network are symbolic of address to problems hitherto satisfactorily manageable by personnel in different branches, with diverse specialisations. Creation of a formalised, distinct, and integral identity for coordination of battlefield mobility was not demanded by the situation earlier as technological developments had not occurred in significant measure. The interregnum between the formation of such a formal structure and its evolution to a more perfected mechanism should be used for creating environmental conditions conducive to assiduous nurturing of ascendancy in procedures, analysis, and equipment so as to indirectly permit realisation of the system is full potential, and enable it to contribute as a force multiplier with expedition.

Finally, analysis of the system by enclosing it and studying, and then reopening and observing its interactions with other systems affecting mines, could provide conclusive deductions. At the outset, it seems that unless superior functional organs are provided, positioning of professional stalwarts at the operational level can only marginally assure higher combat effectiveness, and excision of possible future malignancy.

### CONCLUSION

Mines are increasingly playing more significant roles in modern warfare. Given the nature of mobile forces, our own desires of conservation, and technological improvements in mine warfare, mines can be useful in the expulsion of an intruder. The discussion above gives a generalised resume of the state of the art in mines, minelaying, its effects, and the manner in which an enhanced role can be assigned to the use of mines. Some thought has also been given to the trends of this form of warfare in a future setting and the development of its control system. The subject being vast, only mobility reduction has been dealt with. Mobility enhancement is another matter.

## Strategic Importance of Diego Garcia for the Surrounding Areas\*

—DR. B. C. CHAKRAVORTY

**D**IEGO Garcia is a horse-shoe shaped coral island with a land area of about 11 square miles, 13 miles long and upto 4 miles wide,—the largest of the 52 islands forming the Chagos archipelago, of which it is the southern most atoll, lying on the Central Ridge of the Indian Ocean, 7 degrees south of the Equator. At places it is only a few hundred yards wide. Its distances from Cape Comorin (India), Mauritius, Seychelles, Maldives, Aden, Singapore, North West Cape (Australia), Dar-es-Salaam, and Jakarta are 1200 miles, 1250 miles, 1150 miles, 650 miles, 2500 miles, 2250 miles, 2750 miles, 2350 miles, and 2400 miles respectively.<sup>1</sup> Its 140-feet deep lagoon, protected by a coral reef, forms a natural harbour, big enough to take a fleet. The island is frequently hit by fierce cyclones. It is covered with coconut and palm trees, and has an average rainfall of 180 inches a year. It is nowhere higher than 6 feet above sea level and high tides wash over it at some places<sup>2</sup>.

Diego Garcia was first discovered by a Portuguese of that name in 1532, but in the 18th century some French Colonists settled there. Britain took it in 1814 as part of the spoils of the Napoleonic Wars.<sup>3</sup> During the First World War, the German battleship Emden took refuge there in her bid to escape from two British cruisers. During the Second World War, it served as a naval port of call, and its anchorage was used as a fuelling base for naval vessels by Britain and her allies. The British Royal Air Force also used it as a base for its flying boats.

On November 1965, the British Secretary of State for the Colonies, Anthony Greenwood, had announced, in the House of Commons the British Government's decision to set up a new colony (BIOT) in the western region of the Indian Ocean to construct defence facilities for the British and US Governments. Under an Exchange of Notes between USA and UK, on 30 December 1966, which later came to be

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\* The paper, based on published sources only, represents the personal views of the author, and in no way reflects the view point of any official or non-official organisation.

known as Agreement on "Availability of Certain Indian Ocean Islands for Defence Purposes", Diego Garcia, which was a dependency of Mauritius, was made available for the defence purposes of the US and UK Governments for an initial period of 50 years with an option to extend this for another 20 years.<sup>4</sup>

Hence the Chagos Archipelago, including Diego Garcia, was detached from Mauritius in November 1965 before Britain granted independence to her in March 1968. The Archipelago, which then formed part of the British Indian Ocean Territory (BIOT), was retained as a British Crown Colony and its native inhabitants were removed to Mauritius under an agreement, when the island groups of Aldabra, Farquhar and Desroches were detached from BIOT and returned to Seychelles at the time of the latter's independence on 30 June, 1976.<sup>5</sup> The US construction work on the Diego Garcia base, which had started in March 1971, has already gone through 3 phases, ending in March 1973, 1975, and 1980 respectively. On 11 April 1981, the U.S. Administration officials indicated at Washington that the United States had embarked on a 5-year plan to construct/expand a string of military bases across West Asia and the Indian Ocean in support of the U.S. naval, ground and air forces in the area which would cost well over \$ 2 billions out of which \$ 237.7 millions would be spent on Diego Garcia in 1981-82 (from 1st October 1981 to 30 September 1982). Now, after dredging, the lagoon is reported to be 45 feet deep and able to berth and service the largest U.S. battle carrier group. As many as 12 warships can dock in the lagoon simultaneously. A 750 feet pier has been completed. The airfield, originally a 3500 feet runway, is now extended to 12,000-feet, is able to handle DC-8s, C-14s and KC-135 tankers, but not B-52s on a regular basis. After support outriggers are installed on the runway, B-52s flying out from Guam will be able to land and refuel on Diego Garcia. The fuel storage farm can hold 640,000 barrels of oil and aviation gas. There are airconditioned quarters for over 600 men, and temporary quarters for an additional 1,200 men 5 A. The U.S. has recently gained landing and refuelling rights for their aircraft in Northern Australia, but when Diego Garcia becomes ready for them to land, the U.S. military capabilities in the Indian Ocean will be greatly improved.<sup>6</sup>

Although for a long time the U.S. spokesmen have been raising the bogey of the existence of Soviet bases in the Indian Ocean, especially at Berbera in Somalia, which has not proved to be true, for creating the U.S. bases in this region, the Statement of Mr. Robert Komer, U.S. Under Secretary for Defence made on 3 Apr 1980, has laid bare the American security strategy in this part of the world.

According to him, USA would station Americans in Oman, Kenya and Somalia to act as caretakers for expanded military facilities such as ports and airfields which would be kept ready for use by the U.S. military forces, including the Rapid Deployment Force (upto 110,000 men) whose heavy equipment and ammunition would be stored on cargo ships to be stationed in the Indian Ocean. He also said that the fast but light 82nd Airborne Division deployed there would be supported by Marines and other forces to fight Soviet Divisions or those of other countries equipped with Soviet Armour in any Gulf conflict. He added : "By 1985 or 1986 we will have a very respectable capability in the area", and the Admiralty would ask for an undisclosed amount of money to improve military facilities for use by the U.S. forces in Oman (Thamarit, Masirah and Sib airfields, ports in Matrah, near Muscat, Mina Qaboos and Mina Rayset in Salalah), Kenya (Mombassa, Embakasi and Nanyuki airfields and ports), and Somalia (Berbera and Mogadishu airfields and ports)<sup>7</sup>. The United States has reportedly stationed part of its 12,000-strong Rapid Deployment Force (RDF) at Diego Garcia which can also serve as a base for a large number of bombers and even nuclear submarines, equipped with Polaris and Poseidon missiles targetted at the Soviet Union. In this context, the U.S. plan to replace the present *ad-hoc* carrier-based naval presence (25 ships including two aircraft carriers) in the Indian Ocean with regular Indian Ocean fleet (5th fleet) based on Diego Garcia has vital implications for the littoral states<sup>8</sup>. In Diego Garcia, seven U.S. cargo ships anchored in mid 1980 with enough equipment for an enlarged 10,000 man Marine Brigade plus some Air Force Squadrons for a period of two weeks.<sup>8-4</sup> The strategic significance of Diego Garcia flows from its link with the U.S. global security-cum-communication net work, primarily based on the three oceans—the Atlantic, the Pacific and the Indian Ocean—served by the U.S. Sixth and Seventh fleets and a possible 5th fleet based on Diego Garcia in future. This island lies at the apex of an imaginary isosceles triangle, the base of which extends from North West Cape and Cockburn sound in Australia to the Simonstown base in South Africa. The U.S. Naval Communication Station in North West Cape is one of the most important links in the U.S. global defence network as it supplies communication facilities to the U.S. submarines carrying nuclear-powered ballistic missiles—the U.S. Navy's most powerful deterrent force.<sup>9</sup> Australia's Cocos Islands in the Indian Ocean are also used by the U.S. Air Force. Other important U.S. bases/facilities in the Indian Ocean are : Balrain (staging facilities only). Reunion Island (Omega communication Station), the French base at Djibouti (facilities for the U.S. navy), Daharan air base in Saudi Arabia,

Nairobi airbase in Kenya, and Silvermine near Simonstown in South Africa (Communication and surveillance station). The French military bases should also be taken into consideration while analysing the significance of the western strategy in this region.

### CONCLUSION

There is no doubt that the U.S. has developed a formidable naval-cum-air base in Diego Garcia as a means to dominate the Indian Ocean and the littoral states so as to checkmate the Soviet influence in this region. This is part of its global strategy as a Super Power, and no amount of protests or conference resolutions against the U.S. military presence on this island is likely to deter USA from its ambitious role of protecting its strategic interests in this area.

The resource-rich Indian Ocean region contains 90% of the world's natural rubber, tin, jute and tea, and also abounds in cobalt, tungsten, copper, manganese, silver, sulphur, coal and salt. Besides being the rice bowl of the world, it also contains about 60% of the world's oil resources, 90% of diamonds, 60% of the Uranium and 40% of gold. None can forget Alfred Mahan's prediction "Whoever controls the Indian Ocean dominates Asia. This ocean is the key to the seven seas. In the 21st century, the destiny of the world will be decided on its waters."

The New Delhi Declaration made on April 25, 1982, by the International Conference on the Indian Ocean, attended by over 1000 representatives from 60 countries and 17 international organisations, condemning the U.S. military presence in the Indian Ocean as "an open challenge" to the peace and security of the world, appears to be a cry in the wilderness, so far as the U.S. is concerned. Similarly, the statement made by the new left-wing Prime Minister of Mauritius, Mr. Aneerood Jugnauth, at Port Louis, on 16 June 1982, that he would "do the utmost in the diplomatic field and international forums with the help of India and nearby countries to have our sovereignty recognised" in Diego Garcia,<sup>10</sup> will hardly cut any ice with the United States.

Besides developing Diego Garcia as a big naval-cum-air base, the U.S. reportedly intends to station an amphibious brigade of about 8000 U.S. Marines on this island at a cost of \$5.9 to \$8.3 billions over the period 1982-89.<sup>11</sup> If international situation drifts towards confrontation, the U.S. has plans to store nuclear arms also on this island<sup>12</sup>. The excuse that the U.S. requires a military presence in the Persian gulf area to protect the flow of Persian Gulf oil to the Western countries is not really convincing. Nor is it plausible that the increasing Soviet naval influence in the Indian Ocean has provoked the U.S. to build up the Diego Garcia base. The fact, on the other hand, is that with a view to resisting any possible expansion of Soviet influence in the Middle East and the Indian Ocean, the United States has been feverishly

building up its military presence all over the area, and the build-up in Diego Garcia is only a part of this over-all strategy. The SIPRI Year book 1973 stated that "Stationing nuclear missiles carrying submarines may have some strategic importance to the USA and USSR but it offers more advantage to the United States, as their, submarines operating in the Indian Ocean can cover significant Soviet as well as Chinese targets from there.....the presence of Soviet submarines in the Indian Ocean could be justified only as a countermeasure to offset the U.S. presence. It would be seen, therefore, that the initiative in renouncing a strategic role in the Indian Ocean should belong to the U.S.A."<sup>13</sup> It is possible that in future when the littoral States of the Indian Ocean would exploit their economic zones up to 200 miles into the sea, the United States may find enough causes for intervention in disputes between the littoral States. Undue Super Power influence over some of the littoral States will only cause disunity amongst the Indian Ocean littorals, preventing them from pursuing a coherent and United policy in favour of turning the Indian Ocean into a zone of peace.

Possibly, the most dangerous fall-out from the Super Power rivalry in the Indian Ocean area can come in the shape of direct attacks on the littorals' ports and other coastal areas in the event of a conventional or nuclear war between the two Super Powers or their client states over a clash of their vital interests in the Gulf area. Perhaps, the military build-up of Diego Garcia portends the beginning of such a scenario.

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## Secretary's Notes

### SEASON'S GREETINGS

At the close of 1983, I thank all members for the keen interest that they have continued to take in the activities of the Institution, which no doubt depends on the support it receives from you all. I will request you not only that you continue to renew your membership by paying the annual subscription well in time, but enrol at least one more member, if not more. Please remember this is your Institution and more support you give to it more strength will it derive and render valuable service.

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