NASHIK

BHONSALA RESEARCH CENTRE
FOR CONFLICT AND PEACE

DAKSH

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B.R.C.C.P.

Central India Military Education Society, Nashik, founded in 1937, by the Late Dharmaveer Dr. B.S.Moonje, is a pioneer institution in the field of Military Education. To promote the ideals of Dr. B.S.Moonje, the society runs various institutions in a single 180 acre campus having classes from K.G. to P.G. covering besides academics various aspects of personality development and physical training.

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b) To encourage students to take up career in the Armed Forces of the Country.

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d) To prepare students for different competitive Exam-inations conducted by UPSC / MPSC etc.

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5) Swimming pool of mini-olympic specifications

6) The facility of NCC/NSS is available for selected students.

7) Inbuilt facility of general preparation for competitive exams.

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9) Military Training which include Drill, Close combat, Swimming, Boating, Rifle firing, Horse Riding etc. are imparted distributing over two years of junior college and three years of graduation.

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POLICY ON SCIENCE AND TECHNOLOGY FOR NATIONAL DEVELOPMENT AND SECURITY

— BRIG. A. A. WAGH (RETD.)

"The importance of creation of the zero mark can never be exaggerated. No single mathematical creation has been more potent for the general on-go of intelligence & power"
— Prof. G. B. Halsted on the concept of 'Shunya' (the zero mark), quoted in the Discovery of India.

Science, technology and mathematics in ancient India was very advanced in the contemporary world. Highly intellectual and given to precise thinking Indian thinkers of the past contributed immensely not only in philosophical development but also in various facts of science and technology. Construction of brick houses with good town planning, knowledge of alchemy, metallurgy & ceramics; know how about medicine and surgery, use of copper and bronze were some of our achievements in the ancient time. Mathematicians and astronomers also made significant contribution to the celestial science. Ancient Indians excelled in mathematics. In fact Europe got its early arithmetic and algebra from India through Arab civilisation, which helped scientific calculations and progress. The concept of "Shunya" (the zero mark) unbarred the gates of mind to rapid progress in these disciplines. Prof. G. B. Halsted (mentioned above) paid rich tributes to this contribution in his book "On the Foundation and Technique of Arithmetic" (1912) He has described the concept like coining the nirvana into dynamo. Yet somewhere during the course of history, we lost the mooring. Gradually disorientation set in leading to decay. Constant invasions, political and social upheavals resulted into apathy and superstitions brushing aside scientific thoughts into background. Although there were thinkers and scholars, the scientific temper ebbed. We

started looking beyond our borders for scientific innovations. Whereas, Europe, which earlier benefitted from the Indian Civilisation surged forward.

Greek and Roman civilisations had enormous influence on the development of Western civilisation. The ancient Romans made few scientific discoveries but the works of Greek scientists had a deep impact on their thinking. These works received due attention under the Roman rule. During the middle ages there was a comparative stagnation but with the intellectual movement of renaissance the scenerio changed. Many brilliant personalities displayed courage to break out of intellectual boundaries and enter into unknown territories. It is perhaps due to the spirit of renaissance that some great explorations took place in late 15th and early 16th century. Industrial revolution gave further boost to scientific development. Actually science played an imp--ortant role in creating industrial revolution. There was a stupendous change brought about by application of science to industry and other areas of human activities. Western Europe and North America changed drastically. Rate of change was more rapid than witnessed through a thousand years earlier.

As the West was making rapid progress, India stagnated. Continuous invasions and conflicts diverted our attention from scientific activities. Warfares generally lead to innovative thinking in development of new weapon systems for future battles. Somehow no serious thought was given to it. Instead we displayed stubborn fidelity to out - moded battlefield practices and adherence to old military thinking resulting into defeats and humiliations. Babar used artillery effectively at Panipat in 1526. But subsequently little effort was made to improve the weapon system or innovate new equipment. Arab gun-smiths cast our guns or variety of equipments were purchased from the European traders by different power centres in the country. This decay and

dependence was applicable to all spheres of scientific activities.

On attainment of independence, the first Prime Minister Pandit Jawahar Lal Nehru who had a good grasp of history was determined to deviate from the past apathy. He was convinced of importance of science and technology for national development. As a result conscious efforts were made to set up a modern scientific infrastructure in the country. A chain of national laboratories, institutions of higher technical education, universities etc. were establi--shed. Pt. Nehru called these "Modern Temples" for national development. On 4th March 1958 the Scientific Policy Resolution SPR was passed by parliament. It highlighted the Government's responsibility to promote, foster and sustain, by all appropriate means, the cultivation of science and scientific research in all its aspects pure, applied and educational. SPR was designed to ensure a well planned effort for promoting growth of science and technology personnel on a scale adequate to fulfil the country's needs in the areas of education, agriculture, industry and defence. Since then the Government is pursuing the Policy Resolution through various Ministries and departments. Although independent India can boast of only two Nobel Prize Winners (Hargovind Khorana for Medicine in 1968 and S. Chandra Sekhar for Physics in 1983) the country reportedly has second largest scientific community in the world today; so also a number of achievements comparable to those of the advanced western nations.

In 1971, Department of Science and Technology was set up to formulate policy statements and to provide mecha-nism for co-ordination in the areas of science and technology. A number of programmes were promoted by this department such as R & D promotion programme, technology development and related programme,

socio-econo-mic development, State Science & Technology councils,
International co-operation in S & T etc. Recognising the role that technology can play in the development of society a Technology Policy Statement (TPS) was formulated in 1983 with the basic objective of developing indigenous techno--logy, and ensuring efficient absorption and adaption of imported technology appropriate to national priorities and availability of resources. Furthermore, based on experi--ence a new technology policy was prepared in 1993. The policy aims at achievement of a greater spread of the use of technological developments to all segments of the society and upgrading technologies to international levels. Presently it is being processed.

India embarked upon an ambitious nuclear programme over four decades ago. In 1948 Atomic Energy Commission was established. It lays down policies on use of atomic energy for peaceful purposes. In 1954 Department of Atomic Energy was set up, whose activities can broadly be grouped under research & development, nuclear power production,industries and minerals. The department also extends financial support to several institutions indulging in basic research in nuclear and allied sciences.

In the area of Launch Vehicle Technology too, there has been a substantial progress. ASLV-D3 was successfully launched on 20 May 1992, injecting 106 Kg. SROSS (Stretched Rohini Satellite Series) satellite into an orbit. Prior to it a constellation of satellites were successfully launched. Development of Polar Satellite Launch Vehicle, PSLV, capable of launching 1000 Kg. class satellite into polar-sun synchro--nous orbit has been perfected and was successfully launched on 15th Oct. 1994. On 16th Oct. 1994 IRS-P2 became operational. Development of Geo-synchronous satellite Launch Vehicle GSLV, incorporating Cryo engine technology is making a steady progress. It is designed to

place 2500 Kg. INSAT class satellite in geo-synchronous transfer orbit. The project suffered a temporary set back when Russia backed out of earlier commitment under U.S. pressure, regarding transfer of cryogenic technology.

Inter-action between the space research organisation and industries is making a sure progress. The space-industries co-operation involves transfer of technology developed by ISRO to industries and utilisation of the potential and expertise of industries for space programme. So far 200 technologies have been licensed by ISRO.

These are a few cases of progress made in certain areas. There is an allround effort in many other fields like electronics, communication, mining, environment, construction techniques, ocean development and so on.

Antartica provides an excellent opportunity for conduct of scientific research for the benefit of mankind. A number of expeditions have gone to the continent since early 80s to collect valuable data. A permanent station has been established to facilitate research on the global environment phenomena. A special Antartic Study Centre has also been established at Goa in 1992 - 93.

It is obvious from the foregoing that on emerging as an independent modern nation state, India is steadily marching ahead using science and technology for allround develop-ment. At present approximately one percent GNP is set aside for spending on S & T endeavour. (As per latest atlas of the World Bank India's per capita GNP is $ 310 by conventional calculations; when calculated by purchasing power parity PPP method, it is $ 1250)

In the field of defence there has been fairly encouraging results. Prior to mid-fifties, there was a Defence Science Organisation and a few technical development establish-ments.In 1958 Defence Research and Development

Organisation(DRDO) was established by amalgamating these institutions.In 1980 a separate Department of Defence Research and Development was formed which administers DRDO and its 50 odd laboratories/establishments. It functions under control of the Scientific Advisor to Raksha Mantri, who is also Secretary Research & Development organisation. It formulates and executes programmes of scientific research, design and developmnt in the fields of relevance to national security leading to introduction of new weapons, platforms and other equipments required by the Armed Forces. The organisation has various disciplines like areonautics, rockets and missiles, electronics and instrumentation, combat vehicles, engineering, naval systems, armament technology including explosive research, terrain research, advance computing, artificial intelligence, robo--tics, work study, systems analysis and life sciences including high altitude agriculture, physiology, food technology, nuclear medicine and so on. D R D O also has two training institutions- Institute of Armament Technology and Institute of Work study.

D R D O assists the serrvices by rendering technical advice regarding formulation of Qualitative Requiremnts (QRS) evaluation of the systemes to be purchased,mathe--matical/statistical analysis of the operational problems. Since it's inception D R D O has made significant contributions to the requirements of the three Services. Cluster weapon systems for fighter aircrafts, a family of small arms, low level surveillance radars (Indra I and II), bridge layer tanks, field artillery guns, advanced sonar systeme, sono buoys etc.are some examples. At present there are high technology projects in various stages of development. Notable being guided missiles, main battle tank & light combat aircaft. The organisation's aim is to incorporate latest technology

and to ensure that the country doesn't have to be dependent on the imports of critical parts.

Normally a period of 10-15 years is required to develop any new weapon system. In case of Integrated Guided Missile Development Programme (IGMDP) there has been appreciable reduced period of development. The Govern-ment of India approved the project in 1983-84 and Prithvi missile is being introduced into service this year. It is a creditable achievement. However, there are also complaints from the services which cannot be overlooked.

These are :-

a) Lack of Originality : It is felt that ideas are taken from the existing equipment available in the advanced countries. Critical components are imported and introduced in the systems under development. As a result when the equipment is introduced in service, the similar one is already in use in other conuntries, Thus we continue to lag behind.

b) Slippage in Time : In most cases target dates are not adhered to. This may be either due to lack of up-to-date technical knowledge or lack of manufacturing facilities to produce critical parts indigenously designed on the drawing board.

c) Deviation from the QR : Often there is deviation from the QR and the Services have to accept the equipment as a fait accompli.

On the other hand D R D O claims it is better to import some critical parts and save time required for their 're-invention'. The Organisation also feels that frequent changes in QR should be avoided as it hinders progress. Furthermore, the Services should not be rigid in their tactical concepts, which could be changed to overcome techno-logical hurdle at the same time to exploit maximum potential of the equipment .

Notwithstanding the foregoing irritations, the D R D O has contributed a lot in our endeavour to be self reliant in defence related technology. Acquisition of latest technology is problematic. Advanced nations are reluctant to part with the knowledge in sophisticated areas. Parti-cularly where the know-how can be used in the weapons of long range or mass destruction, Policy relating to techno-logy transfer is often dictated by the changing geopolitical compulsions. Russia's withdrawal from her commitment to transfer 'cryogenic' technology for our space programme is a recent example.

Recent visit of U. S. Defence Secretary Dr. William Perry and discussions with his Indian counterpart has raised hopes. There is discernible euphoria particularly about transfer of technology. This optimism appears to be mis-placed. Although substantive beginning has been made in Indo-US relations in the sphere of defence including in the field of defence production and research, transfer of technology is unlikely to be the immediate result. Dr. Perry has candidly stated that it could not be primary area of interest at this stage. As assessed by the former Foreign Secretary J. N. Dixit.....'.....U S will remain cautious about transfer of sophisticated technologies and arms to India even on commercial basis unless New Delhi falls in line with U S export regimes and other international regimes governing nuclear technology and space technology.

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MILITARY TECHNOLOGY TRAP
CAN INDIA ESCAPE TECHNOLOGICAL COLONISATION

Maj. Gen. V. K. MADHOK
AVSM, VSM (RETD.)

Having faulted and lagged behind in giving the anticipated momentum to defence technology inspite of a sound infrastructure nourished in the last 40 years, India is caught in a subtle military technology trap. Unless the country can make a determined and coordinated effort to shake off its inertia to come out of the technology lag now, it never would. Till this conclusion can be proved wrong, what the future holds for the country, what must be done to get out of it, are important issues for reflection by the Indian state.

Superior military technology which was only a potential force in the making so far, has matured. In fact, it has already become the most potent tool to dominate their clients, their defence infrastructures and policies concerning security, in the hands of advanced countries. And would therefore be used increasingly to do so in the future. Strategies designed following the Gulf war to develop, sell and control superior technology have worked with telling effect. Defence delegations from developing nations are either rushing to the US, Russia, France & UK to buy spares, engines for aircraft and tanks, replacements for obsolete equipment or to purchase newer gadgets or foreign dele-gations are coming in with offers and proposals for joint production ventures, seting up overhaul and maintainence infrastructures, to sell new weapon systems or just to stimu-late the imagination of military establishments. In turn, fresh initiatives are being planned to further enslave the armed forces of developing countries, the chief target of superior military technology.

A recipient country like India is a typical example. Though a threshhold nuclear and space power, which

boasts of world's third largest chunk of scientists and technical manpower, which has unlimited resources and cheap labour is not only importing major systems but is one of the largest importer of components as well. Badly enmeshed in an intricate and now tightening noose of superior military technology, it is nowhere near replacing the defence hardware & weapon systems of its armed forces, 75% of which has to be imported, by indigenisation.

Agreed, such questions lie in the domain of ThinkTanks, the media and an enlightened public opinion. But even then, when an average citizen, who can no longer be kept isolated from matters concerning security due to availability of information besides the snow balling effect of additional taxes and rising prices which he would have to cope with because of exhorbitant cost of defence imports which the country would have to bear, hears and reads : that India's ageing aircraft carrier Vikrant now anchored at Bombay since Jan 96 would be decomissioned towards the end of this year, its replcement would cost nearly 10,000 crore; that the two prototypes of LCA which were unveiled with such fanfare by the erstwhile Prime Minister Rao on Nov 17,95 at Bangalore, carry an american engine & French avionics are truly not indigenous; that the Indian Army purchased 100,000 AK 47 rifles from Bovaria last year and that too without amunition at an exhorbitant cost; that the country is now contemplating purchases of hi-tech defence hard-ware costing thousand of crores from abroad, he cannot but raise his eyebrows.

He is bound to ask-sooner or later; what has happened to our Defence Research and Development Organisation (DRDO) with nearly 40 highly sophisticated laboratories and establishments spread all over the country or the government controlled production mechanism of 12 PSUs and nearly 42 Ordanance Factories besides the large

dedicated outfits specially created for processing indigen--ous projects like the Arjun tank, most of which have been functioning for decades. What about the quality Assurance Directorate (QAD) under a Lt. Gen., without whose approval no item from a shoe lace to a fighter aircraft can be introduced in the services, with nearly 108 establishments ? From where will the money come to make purchses, to find replacements and to establish different joint ventures ? Further, why no indigenisation, will we ever catch up in the race, or remain at the receiving end ? Thus, the country gradually awakens to the new concept, wherein the advanced countries do not have to go to war to conquer territories when they can control their clients and their policies by other means such as with superior military technology.

Superior military technology and the gadgets it pro--duces like the F 117 stealth aircraft, Tomahawk land attack missiles, laser guided smart bombs, a variety of sensors and so on were first demonstrated with dazzling effect by the US and its allies against Iraq in the Gulf war in 1991. Although most of this technology was over-rated, but India had not sent any team of observers or professionals at that time, to gauge the facts. This technology is primarily controlled by the US, Russia, France, UK-in that order, with China trying to catch up. These countries are also space and nuclear powers and permanent members of the Security Council. While the race to dominate space is chiefly between the US and Russia; as nuclear powers, efforts are being made to keep the non nuclear states and threshold nuclear powers like India, Pakistan and Israel out from their exclusive club. Besides, they are the largest exporters of arms, aircraft, naval vessels, missiles and other defence hardware with US in the lead. In the Indian region, Beijing has armed Myenmar-India's eastern neighbor with a common

border of nearly 1600 kms,which will remain China's chief customer atleast till the military junta remains in power. Further, it is also selling defence hardware to Pakistan, Bangla Desh and even Sri Lanka. The US is jostling to reinvigorate its defence contracts with Pakistan as well as making inroads by selling naval vessels, helicopters and the like to Sri Lanka. And India countinues to remain Russia's chief client although New Delhi is now making efforts to diversify its sources by negotiating with UK, France and Israel. Thus, the territories for technical coloni--sation have been already fairly well delineated.

The bottom line is, that foreign arms factories which employ thousands of workers, scientists and technologists will be laid off, should these countries fail to export defence hardware & connected expertise. Besides, there is a need to develop newer technologies, first to arm their armed forces and then to sell or dump 2nd of 3rd generation and even obsolete technologies. Accord--ingly, the competition for arms markets which was so far chiefly confined to the middle east is now enveloping ASEAN and South Asia. In the

recipient countries such as in South Asia, some of the armed forces are struggling to move from a conventional to a high technology warfare capability-particularly in Pakistan and India. Military technology has become their buzz word. Combat and logistic fitness of their airforces and navy and to a lesser degree in the technical branches of the Army such as the Signals (communications), artillerly(guns) or armoured corps (tanks) is therefore being increasingly assessed on the condition & effectiveness of their machines and armament. Infact, they soon have a new principle of war 'superior technology' added in their lexicon. Although, technology has yet to cause ripples in the non-technical arms like the infantry (foot-soldiers) which in India forms 1/3rd of its over a million strong army, but it would in the

future.

The strategy to control or accelerate sale of superior military technology has been put to work by instituting various machanisms such as the western Technology control Regime,Enhanced Proliferation controls, CTBT and so on. Second, efforts have been made to delay or deny transfer of technology. A memorendum of understanding signed in 1984 on the subject between India & US has made no headway uptill now inspite of the fact that the issue was discussed amicably during the visit of US secretary of Defence william Parry to India in Jan 95.

Three, distinct forays have been also made to delay indigenisation such as in Pakistan and India. While ISRO was denied cryogenic engines by Russia, Islamabad has been awaiting the release of 28XF 16s and connected defence hardware from the US since 1990. And finally, when all this does not succeed, an arms race can be fueled between hostile neighbours. As has been done by releasing an arms package of 328 million dollars to Pakistan under the Brown ammendment by the US, thus leaving India no option but to scout and buy defence hardware from Russia or elsewhere.

STATUS OF PROJECTS

In India, nearly all its major projects are behind schedule. The LCA conceived in 1983 and meant to replace IAF's MIG fleet is 7 years behind. Approximatly, 2188 crores have been spent so far to roll out two prototypes with French and American assistance. It can only be introduced after successful flight tests in the early 21st century say between 2002-2020. Advance Light Helicopter (ALH) of which all the three services would need 1000 or so, is yet to take off after 24 years. Till then IAF has no option but to buy attack helicopters for itself and the Army from Russia or US.

For the Army, its aging tank fleet of T 72 tanks has either to be upgraded or fresh replacements obtainedfrom Russia. Indigenous MBT Arjun, designed to replace the present fleet has already taken 20 years. It is now in its 18 th or 19 th troop trial stage with an imported engine. The integrated missile development programme for Agni, Trishul, Aakash, Prithvi and Nag has done well. But it will take time to be introduced and go into commer--cial production.

What are the causes for lagging behind in India ? First, there is a big communication gap between the USERS (armed forces), the DRDO production agencies and QAD. It continues to grow instead of narrowing down. Services have no control over any of the agencies. When there are delays, services want delegations to be rushed abroad to make hi-tech purchases with the approval of Ministry of Defence so that they can keep up with the neighbours. Second; in the absence of an effective long term forecasting mechanism, India's military technology vision for the next 10-15 years based on the requirements of services can not be made. This has to be a combined effort. The services have to articulate as to how they visualise, the battlefields of tomorrow; how battles will be fought ? What technological gadgets they would want & need and what can be made available by the DRDO ? Three; the private industry which has unlimited scope and talent has been completely left out from participating in defence production for reasons best known to the Government. Its contribution remains confined to fabrication, manufacture of spares and small assemblies.

And last, there is lack of potential direction. It is the politicians and the Ministry of Defence who have to take the country towards self reliance by indigenisation, by involving private industry and to bring defence awareness

in the public so that it does not remain indifferent.

NEW TECHNOLOGIES

Advanced countries are now moving on to acquire newer technologies. To name a few : Russia is experimenting with plasma weapons which will ionise the atmosphere and then destroy the incoming aircraft or missiles intruding over Russian territory. They are at least 5 years ahead of US, in this. US has been experimenting with stealth tech--nology for aircraft, even ships, submarines and missiles. They are also experimenting with laser weapons which will blind or incapacitate attacking soldiers. Defending troops will have a choice to use an ordinary rifle or a battery operated laser to do so. They are upgrading their patriot anti-missile systems to make them more accurate. Further Japan and US are jointly working on a new fighter aircraft F 2 for the early 21st century which will supersede the F 16. The list is endless.

Under these circumstances, left with no option, India has to import hi-tech defence hardware. Negotiations are already on to purchase 40 X SU30 multi-role fighter aircraft from Russia and a Russian aircraft carrier, Admiral Grochkov. Purchases are also under consideration for 60 X AJTs (Advanced Jet Trainers) either from UK or France. While attack-helicopters may have to be purchased from Russia. In addition, there were reports of a delegation led by the CAS to visit Israel to negotiate for defence hardware.

That is not all. India will once again need spares for fresh imports. Currently, spares worth 1000 crores or so are being imported annually to keep our aircrafts flying and tanks functional. Additional overhaul facilities will need to be created for repairs and maintenance. And yet, what India will get is second and third generation technologies. The Russian aircrafts-carrier is a typical

example, which is already 10 years old and under repairs after an accident in Russia.

FUTURE

What needs to be done ? To start with, there is an urgent need for technical education of the armed forces particularly the troops. Combat arms like the Infantry are simply not mentally prepared to use technology. It is easy to import expensive technical equipment but difficult to maintain it. This effort will act as a 'Technologi--cal Womb' for generation of new ideas.

Secondly; India has no institutions like Think-Tank for the future. These need to be established at two levels so far as military technology is concerned; at the Joint Chiefs of Staff level to act as an internal Think-Tank which would combine inputs from perspective plann--ing cells from 3 services and put up the professional angle. The second one, outside the establishment, to include talent from diverse fields such as industrialists, scholars, journalists, retired professionals and the like. By not having instituted these so far, and confined decision makers merely to professional advice, India has denied itself inputs from a vast pool of talent available in the country.

As regards the DRDO projects, there is lot to be done here. In 1989, of the 989 ongoing projects, 618 were dropped. Nearly 371 projects are on now. The reason given invariably for non-completion or delays is non-availibility of funds. But no one talks of mismanagement of projects which really is the root cause of all problems. A parlia--mentry committee needs to look into this.

Four, the private industry must participate in defence production. It cannot do so unless it is motivated and the existing communication gap it has with the services

or the DRDO can be closed. After a long time an Army (including Air force and Navy) - Industry partnership seminar cum exhibition was held at New Delhi on Sep. 14-15, 95. Although late, it is a step in the right direction.

These are only a few of the many measures which can be thought of to start with. The West cannot be blamed for seeking arms markets in the developing countries. It helps them to influence political decisions & foreign policies of the concerned countries apart from making money. They can mediate and also act as loan banks. Arms sellers, as such, will never let two hostile countries come together. In their efforts to do so, they have acquired all the data needed to make their plans which in any case, is so easy to obtain for an open country like India with its retired scholars and professionals working abroad such as in the Rand Corporation- a Think Tank in the US. At the same time, India has a sound technological base, staffed with talented people. It is in a position to recover and even catch up in the long run. But for that, a serious reappraisal needs to be done before evolving a co-ordinated, long term military technology vision for the next 10-15 years and to implement it with determination. If this does not happen, India's 'technology colonisation' would be complete by year 2000.

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CENTRAL ASIA IN TRANSITION

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Nasik-5.

Central Asia refers to the territory covered by the former Soviet Socialist Republics of Kazakhstan, Uzbekistan, Kyrgzstan, Tajikistan and Turkemenistan. Geography and history have combined to create as variegated, a patch-work of demography in Central Asia as may be seen anywhere in the world. Large parts of Central Asia were historically in-habited by nomadic tribes, for whom movement is a way of life.

All the Central Asian states have one thing in common, Ethnic diversity is posing problem for all of them as they try to make transition from an authoritarian polity to a democratic polity and from command economy to a market economy. Now as independent countries, they face a huge problem of under developed manufacturing, narrow markets and the grave problems of capital accumu-lation etc. The agrarian character of their economies is further confirmed by the sectoral pattern of employment as 40 to 45% of workforce is active in agriculture alone. Thus they have now a fragile economy particularly after the rupture of ties with other former soviet republics. Thus the dependent character of their economy is brutally exposed now. Broad and rapid survey of the economic realities, thus clearly brings out that the Central Asian states are indeed poorly industrialised. At the political level, there are some manifestations of fundamentalism and aggressive nationalism. A design of the future based on the sample negation of the past is worse than flawed, this

appears to be currently fashionable, after the collapse of the state socialism. The political elites in these states have their masks on covering the real nature of politics. What exists in these state is a 'facade democracy'.

The paradoxes of transition, thus appear inside the political system between the formal democratisation on the surface, and non democratic informal system in the deeper layers. What vitally needed is the upgrading of economic and political relations on the strength of a clear perception of the political economy of the region.

Evidently, there is a little clarity as to the role of religion and nationalism in the new setting of central Asian States. Central Asian States are richly endowed with human and natural resources. Local outrage over the cotton monoculture and its effects on the food situation had become an important issue of nationalism among the indigenous population before the break up of the Soviet Union.

The shifted and imbalanced development in the past could be attributed to the lack of economic autonomy. But after independence they cannot be ignored any longer without adversely affecting economic progress. The task of economic transformation in the Central Asian States has been highly complex and difficult not only by the historical legacies, but also by the sharp deterioration in the economic situation in these states, since they became independent.

The steep decline in production and consumption and the deterioration in infrastructural facilities is due to the break down in economic linkages after the disintegra-tion of the Soviet Union, disappearance of the COMECON and confusion and contradiction in reform measures.

The leaders of the newly emerged independent states of Central Asia are faced with an extremely difficult and complex economic situation. The urgent tasks of

economic stabilisation and transformation into viable market economies are to be carried out in such a difficult situation.

Foreign Capital requirements of Central Asian econo-mics are truly enormous. No single agency (IMF, World Bank) or country can satisfy such large requirements. these countries will have to search for multiple sources.

Profits and not emotions or religion determine capital flows. the flow of foreign capital into the Central Asian countries from the West or the East would also depend to a significant extent on whether these countries will be able to adopt a well thought out reform programme.

One of the ways in which the Central Asian Countries can meet the situation created by the inadequate flow of foreign capital and make their economies viable is through the expansion of the foreign trade. Many of these difficulties confronting economic stabilisation and structural reforms in the Central Asian States can be reduced to some extent, though they cannot be eliminated.. If these states can form a Central Asian market or establish a common economic space with other members of the CIS with Russia in particular.

An important factor in security, its location next to a geo-strategic shatter zone; West Asia, the cross current of Arab-Israel rivalry, Intra Arab hostility and the conflict between Iran and Iraq have all combined to keep this oil rich region in a state of continuous turmoil and instability leading to periodic wars.

The unplanned exploitations of minerals, excessive cotton monoculture and increasing population have all imposed a severe strain on the ecology, and in particular its impact on water managment.

It is important to consider the crises that might emerge and the threats, they might pose to security in Cenral Asian States. There are three characteristics that are relevant,

one is that of Artificial borders. Next is the potential for ethnic conflict, the third issue is one of economic transition. Territorial integrity has become the basis of nationalism. The belief that religion would become the basis for permanent alliances is a misconception.

Central Asian states intend to play off various powers against each other, establish a model suitable to their ruling regimes and take into account multiple variables in their geo-strategic planning. Today the need for Central Asia is to remain in a single economic area with Russia during its period of transition. National security, as usual, is an essential requirement of the foreign policy strategy of Central Asian states.

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US ATTEMPTS AT ORDER IN SOUTH -EAST ASIA SEATO YEARS.

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THE STRATEGIC SETTING :

In recent history, until the recognition of the United States as an Asian power, that came only after the Korean War, S.E. Asian politics had not experienced many deliberate attempts at establishing any order either by regional powers or outsiders. Though India and China wielded some influence in this area a concerned attempt, however reluctant, to establish 'order' in S. E. Asia came only from the British in India. Japanese wartime efforts at establishing 'New Order' ended with defeat in the pacific War. S. E. Asia had never been a 'bulwark of peace and prosperity'; but if K. M. Pannikar was right in claiming that stability in S. E. Asia depends upon the partnership of India and China, (1) then such a partnership seems remote. But this statement also reveals a common disposition to assume that actions and attitudes of certain outside powers are crucially important in determining local events.

The US policy in this area before the war was as the then Secretary of State, Hull adequately put, 'orderly process in international relations be maintained (2)
In the interwar years it had simply implied, despite reluct--ance to so admit it, that U.S. would not tolerate domina--tion of any single power, at that time Japan, in Asia. The then U.S. policy of 'open door' towards China, as in case of the new one towards Red China later, was also the manifestation of a similar concern that balance of

power forces be allowed adequate, play in maintenance of stability in the region. In case of Communist China the policy was slightly modified to accomodate a self-contained, strong, yet definitely limited China. It was the communist menance and Japan's position that made U.S. take to a policy of 'inter-position'. (3) However, implementations of such a balance had its problems. It was extremely difficult to draw territorial demarcations for they were likely to call in undesired intervention. The internal problems of S.E. Asia, a product of revolution-ary state of affairs, marred by violence and insurgency, disturbed by instability, required both prudence and flexibility in approach. There was a need for a 'priorities approach' so as not to rely on a single theory like balance of power but that approach and unforeseen problems. Domino theory is a variation of the cost value theme of 'priorities approach'. (4).

It cannot of course be proved that the earlier balance of power, that which ended in 1916, did infact provide for security and stability in the East Asia. But it is clear that when the multipolar structure did deter-iorate, the thirty years of increasingly bipolar politics did lead to a war. It could be to avoid such a confla-gration again that a multipolar balance would be desirable. The balance of power as exists in Asia is more, to use Inis Claude's terms, a policy rather then a system or a situation.(5) To promote their separate interests, the USA, the Soviet Union, China and Japan now find it desirable to stabilise competition for influence and advantage in Asia. Steps to normalize relations continue but this does not warrant calling it a system.

But then the 'stability' that the classical balance provided was for the maintenance of a state system in which Great powers would co-exist without any one power dominating the system. Such a balance was

unlikely to be of any comfort to the lesser powers for it did not provide any means for preventing wars, annexa-tions, bilateral settlements or dismemberment of smaller states. And if Asian balance of power is only a matter of policy, neither institutionalized nor descriptive of a genuine balance, then it is subject to all the vagaries of shifting interest and sudden opportunities.

Geneva conference on Vietnam, Combodia and Laos, producing the July 1954 settlement, followed by the 'Manila Conference' in september 1954, leading to the creation of SEATO marked the watershed of US policy in this region. Through the events of 1954, emphasis of US policy in S.E. Asia shifted from decolonization to security. The changed perception of security, identified by SEATO as insurgency and subversion became increas-ingly evident. The sun had almost set on the Western Empire, but many in Washington feared it was rising on the future communist realm. The implication of this concern was to condition U.S. policy for years. The near completion of formalities of decolonization in 1954, practically co-incided with U.S. commitments to mainland Asia. However haphazard, uncertain, or unstable, it was a hurried U.S. response to the breakup of an older order and an attempt at creating a new, if not just a transitory, order in S.E. Asia.

THE SECURITY-SOLIDARITY FORMULA : SEATO

There may be something in the claim that North Korea would not have attacked South Korea in June 1950, had it been in the U.S. defence perimeter. The Korean Crisis brought about a system that may be described as a 'Korean' system of alliance.(6) This coalition was an instrument dealing with two problems :

a) Balancing or containment of conventional military power deployed by the Soviet Union and China in the

Eurasian Landmass, the maintenance of independence of smaller states being the rationable or the value justifying it.

b) Employment of a global nuclear deterrent : While advances in weapon system have sufficiently altered the value of various bases, hence also alliances, the alliance system probably still remains indespensible as a condition of effectiveness for fundamental basis of U.S. posture. (7)

The defence perimeter which included Ryuku Islands, the Phillipines, Australia and New Zealand was no longer regarded as an outer line of defence; it was to represent the starting point of further U.S. commitments in the area.(8) But this American initiative in S.E. Asia came only in 1954, and by then Asians had done much to counter the claim that Dulles was the spiritual father of the S.E. Asia Pact concept. In 1949, Phillipine's President Elpidio Quirin proposed one such alliance that was initially to compose of Nationalist China, Korea and Phillipines and was to have economic functions also.(9) The Korean War experience induced the U.S. to enter into a series of treaties with Japan (1951), Phillipines (1952), Australia and New Zealand (ANZUS, 1952). The timing of the latter two, so close to the Japan Treaty reflected an inescapable political fact. Only by making a pact with them would U.S. win their support for a settlement with Japan.(10) All three distrusted Japan, and Australia in particular was fast loosing with in the commonwealth.

This Australian dilemma became more clear when Eizenhover announced that Britain was not 'indespensible' for a S.E. Asia Pact.(11) For while the pact was only a strategic necessity for the Western powers, it had immediate security implications for Pacific Asia. The British were ready to commit themselves only if a settlement was

reached at Geneva. The British cabinet approved that "we can give an assurance now that if a settlement is reached at Geneva, we shall join in guaranteeing that settlement". The cabinet gave no assurance as to the course of future action in event of a failure to achieve a settlement. (12)

The initiative at Geneva conference that was in the hands of Britain & France, due to U.S. reluctance over recognising China, had soon passed over to Australia, it being more an Asian power. Yet Australia was unwilling to underwrite the Franco-American policy on Indo-China, and it sought to disentangle the two specific but related proposals : The backing of Vietnam regime through intervention, and second, the creation of a mutual security pact to halt further expansion of communism.(13) The confusion within the two proposals was likely to jeopardise the Asian support for plans to 'band together' free countries to declare a common concern for freedom of S.E. Asia. The international guarantee that finally materialized as SEATO remained limited in character and membership only to be criticised by such nonaligned countries as India as being a Munroe Doctrine for South East Asia. (14)

The Manila Pact had crucial features : One military, and one political.(15) First it served as a device to put on more permanent basis the staff consultations that had previously been hold concerning security in S.E. Asia. The treaty served as a framework for continuation of these contracts and specified circumstances, as armed aggression in Treaty area, in which case the plan would gain a military significance. Second, the Treaty was an expression of wider political alignment on part of a number of states concerned with S.E.Asia, an align-ment that formally placed them on the side of the U.S. on matters concerning security and political future of this

area. For Asian states, the choice represented a western orientation to international relations, a cause that was to elicit much criticism as it assumed the formula 'security for solidarity' running both ways.

The Treaty, however, marked the first ever explicit recognition of dangers of subversive activities in S.E. Asia. Its Article 2 provided for measures 'to prevent and counter subversive activities directed from without against territorial integrity and political stability' (SEATO, Art. 2). The threat of subversive activities, it was pointed out, was particularly acute in S.E. Asia where communist forces have attempted to capture revolutionary and anti-colonial movements, and in the post-war age, this threat has increased. The obligation of parties 'to consult immediately in order to agree on measures which should be taken for common defence' (SEATO Art. 4(2)) was clarified by Dulles : 'A revolutionary movement ... would be a grave threat to us. But we have no undertaking to put it down; all we have is an undertaking to consult together as to what to do about it.' In response to further questioning he assured that if any action had to be taken as a result of such a consultation it would be in accordance with our constitutional process. (16)

Article 4 that deals with aggression constitutes the real activating operative core of the treaty. The obligation of U.S. under this article, however, is limited by virtue of an 'understanding' (17). It reflects the special position of the U.S. as the only treaty member which does not have any territory of its own in the protected area. It also establishes that U.S. concern with the area is not primarily with local disputes but with the spread of Communism as a threat to the security of U.S. and the free world. For the remaining signatories, however, the treaty deals with any and all acts of aggression which might disturb the peace of the area and in such cases the U.S. agrees

to consult with other parties as provided for, in article 4(2).

Another special feature of the treaty was the creation of 'Protocol States' which were included as being under protection of SEATO. The northern limit of the treaty was fixed as 21°:30' N. Lat.

The failure to agree on military measures of any concrete character arose not merely out of 'Congress--lonal sentiment that has hardened against a NATO style commitment', or of the impending shift in U.S. defence policy from massive mobilization to flexible defence. It arose primarily out of radical divergence between strategic priorities as seen from Washington and London.(18) U.S. interests in this area were basically peripheral and negative in character; and Britain after Indian Independence held a tenous line of defence here.

The conflict of priorities remained unresolved even after Bangkok council meeting of 1955 that created Thailand as the centre for SEATO activity. For financial reasons Britain was reluctant to shift from Singapore, while U.S. that was always given Manila a central place in its defence perimeter was equally reluctant to shift to Bangkok. Bangkok was to remain an inconclusive compromise for SEATO. The Bangkok meeting did not proceed beyond exploratory debates. Most of the organs created were advisory in character.No central machinery was created for countering subversion, and beyond exchange of information of a general nature no united command was set up.

Thai demand for stationing of SEATO troops was rejected in favour of a mobile defence idea. About aid the position was equally unclear. The forum of SEATO was recognised, however, 'there was to be no duplication or replacement through SEATO of the valuable work being done through other agencies. In the Colombo plan and UN agencies Australia and other Western countries have made an appreciable contribution towards development of this

region. (19) In contrast New Zealand constantly linked aid to secutity and its aid pattern shows continuous bi-lateral assistance only to S.E. Asian countries and not to any Third World countries elsewhere. (20)

In the long term the stabilising value of Manila Pact would have depended upon whether it became a centre round which regional solidarity would develop. But the irony of the treaty was, it setback the same without which it could never function effectively as a security organi-sation. It caused divergence between two major non-communist countries in Asia, Australia and India, it sharp-ened the existing diffeences between three Common-wealth nations of Asia and was denounced by India, Burma and Indonesia as neo-colonial.

SEATO turned to an extra-rational side track at Karachi council meeting of 1956 when Kashmir issue was brought in by Pakistan, this despite the fact that both Britain and Australia had made it clear to pakistan, right at the incep-tion of SEATO, that they would not assist Pakistan in the event of a conflict with India. (21) Pakistan was the only colonial power to join the pact and immediately after joing it left the profound anti-comunist stand it had fostered earlier. After the end of Dulles era the U. S. revised its policy from pro-Pakistan as did Soviet Union who left initial equidistance in favour of India.Pakistan's Western allies too tended to go the same way. Pakistan's eventual courtship with China was predictable to the extent that U.S. did not sufficiently honour Pakistan's previous markedly pro-Western policies. Incidentlly, the Secretary-General of SEATO was to maintain that SEATO had nothing to do with such a development, besides it was welcome as a peace-making move. (22)

When trouble errupted in Laos in1960, Washington charged China and Vietnam of seeking to keep tensions alive in S.E.Asia. Throughout the development of the crisis

there was a strange silence on part of Washington about SEATO. The Washington SEATO Council meeting (1960) did not do much more than call for more vigilence. The situation in Laos continued to worsen, unabated. The prospect for military intervention under SEATO had never looked so encouraging. But at the Bangkok council (1961), that met amidst the exniosive situation the Western powers gave an indication that they would not go that far. (23) Thailand, the country most concerned, was understandably puzzled at any suggestion that SEATO might not, after all, be used for the job it was intended for. This explains the forceful opening statement. "Thai delegation will not dodge the problem... if lack of determination and unity of purpose is weakened that we should yield to a superior force of destruction, the collective security system on which the organisation is based shall prove to be failure". (24)

Doubts about the military effectiveness of SEATO led to a feeling in the Philipines that it should be written off as an effective anti-communist force. Predictions that SEATO would not survive this crisis were confirmed by the political agreement of the members that if there continues to be an active military attempt to obtain control of Laos, SEATO members are prepared, within the terms of the Treaty,to whatever action may be appropriate under the circumstances. (25)

Philippines also went ahead to suggest the exclusion of Britain and France and that Australia take a fresh initiative with the backing of U. S. to form a NATO type organi-sation. Neither U.S. nor Australia took any steps to recon-stitute SEATO, although by 1966 there were sugestions that. Thailand, Philippines and USA were contemplating on widening of SEATO to include Indonesia, South Koea, Japan and Taiwan. (26)

Importance of Thailand was once again made felt with the Rusk-Thanat Pact (1962) by which the US has

agreed to defend Thailand without prior agreement of SEATO.(27) This brought in the explanation, that SEATO commitment was individual as well as collective, a product of SEATO's importance at Laos and consequent Thai fears. Thai commitment to SEATO represented a choice of friend you have known, tested and found reliable, your friends too, had to be enemies of your enemies,' (28) That the inherent flexibility of Thai policy would have diluted this commitment at the slightest show of U. S. weakening, is only a polite statement of Singapore's views, that 'Bangkok would enter into the same sort of agreement with Peking. If attacked, as that concluded with Tokyo in 1942.' (29)

SEATO did not have much to celebrate as its Tenth Anniversary Council meeting at Manila (1964). They seemed to have had inherited French troubles in Indo-China while France now appeared with the only proposal for solution which could bring peace to the unfortunate peninsula. Apart from telling each other that SEATO was well and provided 'stabilizing influence', the eight members were well aware of the internal rot of the artificial edifice.

The Conference comunique expressed Council's 'deep interest and sympathy of the Government and people of Vietnam' but it was known that U.S. was getting even more deeply involved with no visible SEATO support. (30) Britain received no support from U.S. in Malaysia except verbal and Pakistan sat calmly so as not to jeopardize its understanding with China. Phillipines remained uncertain and Thailand criticised French proposals of neutral Indo-China as playing into the hands of others.

--- to be continued

FOOT NOTES

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