POINTER

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Foreword

With the approach of 200 and the new millennium, it will usher in, the Editorial Board decided that it would be appropriate to turn this very last *POINTER* issues of the current millennium into a nostalgic retrospective spanning the three decades of the journal's necessarily the best - published from the time of *POINTER's* inception which would provide a sense of how the journal has developed over the years. This entailed the rigorous exercise of having to physically peruse hundreds of articles that have appeared in the journal since its inception in 1975 - a task ably undertaken by Mr. Wong Chee Wai, Mr. Lim Choo Hoon and Dr. Kumar Ramakrishna of SAFTI's Military History Branch. If this task was tedious, it was also fruitful, because one interesting fact emerged: *POINTER*has evolved in remarkably close tandem with developments in the SAF. It is therefore not incorrect to declare that the story of *POINTER* is in many ways the story of the SAF.

Hence, in the first decade (the 1970s), against the wider backdrop of a young SAF still finding its feet and sorting out its *modus operandi*, it is no accident that *POINTER* reflected this emphasis on getting the basics right. The majority of the articles published during this fell within three categories : Military Training, Instruction and Instructional Aids, and Communication; all these reflecting *POINTER's*origins as a publication of the School of Military Instruction (SOMI), then known as the School of Methods of Instruction. In this respect, the articles by then-LTA Kwan Choon Tuck on *Reading and Growing*; by-then-CPT Michael Lee, *et al, on Methods of Instruction - How effective are They in the SAF?* and by the-LTA Bey Soo Khiang on*Training and Learning*, provide a flavour of what was condsidered topical in the 1970s and in the early 1980s.

As the 1980s progressed, the SAF, having built up the hardware in terms of equipment, doctrine and training, began to shift focus to software issues: human resource management and development, education and the SAF's role in the wider society. In this context, many *POINTER* articles dealt with topics such as People-Oriented Management, Military History, Strategic Studies and Defence Policy. The emphasis on maximising human resource is well illustrated by three articles:*Towards Managing for Greater Effectiveness* by COL M. S. Gill; *Management by Objectives for Better Management Effectivenss in the SAF*, by then-LTC Low Yee Kah and a MINDEF Project Group; and *Towards a More Productive SAF: A Behavioural Approach*, by then-CPT Tan Wee Ngee.

The increasing concern for professional excellence, meanwhile, is illustrated in two pieces. A groud-level perspective is provided by then-2LT Philip Jeyaratnam in *Military Professionalism - A Platoon Commander's View*. This is followed by a classic exposition on what professionalism means at the individual and organisational levels by then-Bg Lee Hsien Loong in this *Professionalism in the SAF*. The rapidly growing interest in Military History and Strategic Studies is evinced by then-MAJ (DR) Low Wye Mun's *A History of Tanglin Barracks: The Early Years* and by then-2LT Choe Tse Wei's*Security for small States*. Last but not least, then-CPT George Yeo, in an early article, attempts to spread the message that defence is everybody's business in his short but profound, *The Military and the Nation-State.*

By the 1990s, the SAF had achieved full maturity; its technological savvy and sophiscation were already talking points internationally. The thrust now was to maintain operational readiness, keep abreast of rapidly developing technological changes, as well as encourage amongst the officer corps an intellectual acument for processing complex regional security developments. For its part, *POINTER* by now, had also come to a long way from its days as a SOMI periodical, focusing on training and instructional matters. On the one hand, the wider concern for operational readiness is illustrated, for instance, by the increasing number of submissions on Military Medicine. In this respect, then-COL (DR) Lim Meng Kin's *The Unseen Enemy* offered, and still offers, much food for thought. As for technology, LTC Sng Seow Lian's *Not by Technology Alone: Military Technology in Perspective*, represents one of several submissions during the decade that debates the limits of military technology. Finaally, the sophiscated pieces by then-CDRE Teo Chee Hean (*Maritime

Power in Southeast Asia); then-CPT Goh Teck Seng (*War and the Use of Force in the Contemporary World*); and then-MAJ Goh Kong Yong (*Is China Predisposed to Using Force? Confucian-Mencian and Sunzi Paradigms in Chinese Strategic Culture*), are a sampling of the widespread interest in Strategic Studies extant amongst today's officer corps.

It must be reiterated that this selection is not meant to provide a list of *POINTER's* 'All-Time Greats'. It is doubtful that any such list can be compiled as it would be far too long guve nthe large number of excellent pieces that have appeared between *POINTER's* covers over the past 24 years. If however, some of the articles in this compilation open a window to the past and enable the reader to enter int othe immediate contexts of the authors, to recreate their environments and see through their what problems the SAF faced and overcome at various stages in its development, this would be good enough. To retain a sense of and to draw strength from one's good own heritage is a vital part of preparing for future uncertainties. As the next millennium dawns, it is hoped that this commemorative issue of *POINTER* will encourage such an awareness.

Chairman and Members of

POINTER Editorial Board

Training and Learning

by LTA Bey Soo Khiang

Both training and learning have a place in our Air Force programmes. The purpose of this articles is to define the meaning of training and learning, their differences and effectiveness so that each programmes can be cost-effective. I am writing with the Air Force very much in mind and so how this article can be applied to the men and officers from other arms depends very much on the reader.

Training is a concern for what a trainee does, how he behaves and reacts to various situations. Training instils a conditioned response to a conditioned stimulus. This is often found in a training pilots to react to particular emergencies they would face in the future. However this method has a great setback in that it is quickly forgotten by students. Studies have shown that after a lapse of 30 days, non-experienced pilot would forget 25 to 30 percent of his aircrew training in accordance to the retention curve. So if this method of instilling conditioned responses is used, re-training would have to be a permanent feature for effectiveness. Furthermore, not every emergency situation can be simulated and hence the response will be incorrect when a different situations arises.

For these very reasons, I believe we should modify our programmes to help the trainee gain an understanding of the subject matter within his environment so that he can use this as a basis for judgement and responsible action. This depth of understanding is what we term as learning.

Learning is a concern for what the student understands. It involves a reorganisation of the perceptual process, an insightful learning whereby a person has the appearance of the complete solution with reference to the total environment. Learning is the building up of ideas and insights, an internalisation of environment and through this process, the understanding can only be gained if the trainee actively seeks, accepts and internalises information. From what he has understood if the general environment, he can draw specific facts to solve specific problems.

Learning can generally be achieved by a combination of various modes of learning. Each mode of learning will now be discussed so that the facilities and environment can be conductive to absorbing everything is all that is necessary to have an understanding of the subject. It is at this juncture that we should emphasise the necessity of a well-equipped and highly organised library. The shortage and lack of textbooks will stifle the progress of such students.

Charts, schematic drawings and appropriate statistical information are the keys to understanding for some trainees. It is gained by perceiving the total structure in brief non-textual form. However, for some students these visual aids are often used in futility. What these students need for total understanding is a time when they can feel and fondle the switches and various components than to try to comprehend the abstract ideas in books and charts. It is here where availability or training aids, scaled-down models and even a short attachment to the maintenance flight increases understanding tremendously.

Oral study and discussion of the field of study may be the only way by which a trainee can commit learning to real understanding. Discussion groups, oral tests and quizzes can be organised to help students who learn by this process. For others experiencing failure or making an error creates a very deep impression in their lives. Learning through the failure and error experience technique might be too costly and it is here where instructors have to exercise discretion as to the degree of freedom the trainee is permitted to enjoy.

Having described the various modes of learning, we must confess the lack of precise knowledge as to how each individual student learns. Favourable results cannot be expected by just simply applying a particular method of instruction on the part of instructors, for this will only cater to a small group of students. If the instructor is to effect a deep understanding, he must know his students well. The trainee's interest, verbal

skill, manual abilities, social attributes are important clues to the mode by which he learns. The instructor's role now is to provide the appropriate stimulus and motivation. This cannot be done even though he may have a clue to the student's mode of learning unless he has a thorough of the training facilities and teaching aids available. Careful planning is necessary as most courses are conducted within a specific time period. The knowledge of the student will also enable the instructor to provide the student with the challenges in learning in each of his representations. The challenges are absolutely necessary, for the student will not learn when he feels that the subject is too simple to require serious attention.

Having set the challenges, careful consideration must then be given to maximise student participation. Most instructors fail at this stage because they over-estimate their own instructional capability. Time is often wasted when they are carried away by their eloquence. Understanding more often than not, is dependent upon the student asking questions. These questions, though they may appear foolish at times, often lead to precise understanding. If questions are lacking, instructors must create problems for students to solve in pairs or groups. Free access to equipment and time must be allocated for unlimited exploration of solutions to these problems. Finally, the instructor must not assume the student has complete understanding until the student is able to demonstrate and explain his understanding of the subject matter.

It sounds like a lot of hard work and careful planning on the part of the instructor but surely the greatest reward and satisfaction is derived when there is great understanding. This understanding will remain with the student for the rest of his career.

Reference

Air Clues, Nov 1976, Vol. V, No.11.

LT-GEN Bey Soo Khiang is presently Chief of Defence Force.

The Military and The Nation State

by CPT George Yeo

The phenomenon of the nation state - as the highest, the most stable and effective political expression of human beings organised into groups - continues to confound those who decry the barbarity of old-fashioned nationalism, and who wish its supercession by a form of social organisation dedicated to higher preaches proletarian internationlism but practises a nationalism no less cynical?

So long as the nation state is necessary in this period of human history, it must preserve itself. Hence, it is ultimately founded on military power, or to be more precise, the balance of such powers, which by limiting the competition between states, makes possible their peaceful relationship with each other. In this contest, nationalism and patriotism are but the group instinct for collective survival. They are virtues because they are vital to the existence of the nation state and to the military preservation of its interests.

The small state is able to assert its independence only to the extent that is can find room in the interstices in between the contending interests of the larger states around it. Unless such a state is internally united, it cannot be strong enough externally to avoid being crushed or absorbed by others. And its conduct of foreign policy in only as effective as it is able, if need be by military force, to prevent the balance of power from being tilted against it. If on the international chessboard, the small state cannot be queen, it should at least strive to be a bishop and not be contented to remain a helpless pawn.

The case of Singapore begs many questions. Her institutions are young, if not fragile; her diverse cultural heritage a recurrent source of conflict; her people still largely possessed of the mentality of the trading post, flushed in the general economic prosperity but myopic in its perception of the future. Indeed, the history of the Republic thus far has been the history of the forging if disparate elements into one nation. As a people, we do not have the fanatical discipline of the Japanese. We are not, unlike the Jews, fired by an all-consuming sense of destiny. We have only ourselves. And National Service becomes both a strength and a weakness because those upon whom falls the burden of providing that confidence. For they too are a part of that citizenry. And they must first be convinced that the resources invested in the military, that the attention given to its development, that priority on its effectiveness, are final proof of the determination of this nation to survive as an independent nation.

The questions are easily asked; they cannot be answered in the abstract. A nation like ours cannot be properly forged in prosperity. The prosperity only affords the time, buys the means with which to male preparations. Fir it may have to be in white heat when we truly melt into a nation, and when that day comes, the melting pot - which itself must not melt - will be the military.

BG(NS) George Yeo is currently Minister for Trade and Industry.

Military Professionalism - A Platoon Commander's View

by 2LT Philip Jeyaretnam

During the current debate on management styles within the SAF and on the role of the SAF and our image as the protectors of our nation, an important area has been neglected and that is the whole question of our moral position as soldiers and officers, not only in peacetime but also in war. Moral education in the army appears to be restricted at the present time to the singing of patriotic songs. These are of course important in building a sense of community but are deficient in creating the moral astuteness that prevents atrocity in war and apathy in peace.

The values on which our army implicitly rests are the concepts of duty, honour and country. Duty can be convinced as a commitment above personal interests, a willingness to a sacrifice self for a greater good. Honour is its necessary complement: behaving only in a fashion that maintains the dignity of one's office and appointment. Country is the concept which gives meaning and direction to duty and honour: namely service to the State.

These three words, when linked to the value of personal integrity, provide a complete picture of monastic devotion to service. But this picture, perceived with zeal and dedication when a cadet, seems unrelated to the reality of modern army life. Suddenly one realizes with job security, pay scales and promotion. Officership has ceased to be a profession and become merely an occupation.

These attitudes have been reinforced over the years with the increasing emphasis on managerial skills and productivity. Our philosophy has become profit-orientated: we have taken our models from successful industries and assumed that this is the key to success. The command structure has tended towards bureaucracy, i.e. vertical control. The common bond between officers, namely the code of ethics based on the President's commission has been undermined. This can be illustrated by the experience of many junior officers, who find themselves treated with suspicion by regular and senior officers rather than welcomed into the brotherhood.

What are the consequences of this? It can be argued that by adopting an entrepreneurial approach we are simply adjusting to current social values. The problem of the degree the military organisation must reflect civilian values is an old one. We have a contended that regimentation is inimical to our democratic Republic. This is well and good but id matters are left to drift, our army will also drift because it has no moral vision.

The root problem that any army faces is cohesion - to get men to stand even until death under the terrifying conditions of battle. To achieve the kind of motivation necessary for this, we must educate our soldiers, especially our officers, in the responsibilities and ideals of the professional soldier.

Our army still practises the major ingredients of the military socialisation process. We keep our soldiers isolated while in training and we have built up togetherness by keeping units together through one's reservist career. The symbols and traditions of loyalty have been carefully nurtured as the recent presentation of unit colours to the Guards indicates. There is fear of authority to ensure that the disparate members of our heterogeneous society conforms to acceptable military behaviour, for example, as regards drug taking. As a result, our men do have a sense of community and loyalty.

What we lack however, is an inspired officer cadre. We are increasingly left with a new breed of managers who want productivity and a good report to show superiors. Officers now have an increasingly bureaucratic role and this has had a threefold effect:

- ***No sense of common fate with subordinates***. Officers are assigned to jobs rather than units, thanks to their rotation to different appointments. Units broke down in Vietnam because they

shared no sense of common fate: the officers served in combat tours for six months while the troops served for twelve.

- *No sense of dedication to the point of martyrdom.* An army whose officers do not lead from the front and share the burden of death will almost always be an army that does not fight well. The American officer corps constituted about 15 percent of the Army's total strength in Vietnam yet it took about 7 percent of the casualties.
- *No sense of right and wrong.* Most officers would be unable to make moral decisions in wartime and this would probably lead to atrocities against civilians and prisoners-of-war(POW). Officers have not been educated in the distinction between combatants and non-combatants and generally view the Geneva Convention as irrelevant. This could easily result in the negation of the civilised values we would be fighting for. This is quite apart from the utilitarian reasons for fighting fairly: the psychological encouragement it gives to the enemy to surrender. (This phenomenon was clearly shown by the British in the Falklands.)

What do we need to correct this trend? Firstly, we require a new emphasis on moral education which stresses the following principles:

- **The dividing line between combatants and non-combatants.** We are soldiers with a duty to serve and kill for our country. We may not be willing participants in a war but we are nonetheless involved. There is a distinction between us as soldiers and civilians because civilians have made no profession of arms. Therefore we must try our best to avoid civilians casualities. POWs must also be classified as non-combatants because they are in a state of surrender.
- **The moral imperative of evacuating casualities and corpses.** This is a scared duty we owe our fellow-soldiers especially when we are commanders. There is also the utilitarian reason for this: men will not fight unless they are assured that their remains will be evacuated and properly disposed. Failure to ensure this by commanders could result in a drastic drop in morale during wartime.
- **The nature of military necessity.** The success of the mission always comes upper-most. This is the essence of a soldier's service to the state and his obedience to orders.
- **The recognition of moral responsibility**. Military necessity does not excuse the commander from moral decision-making. There is no moral-free zone where obedience to orders makes the soldier only a pawn to military necessity. The weighing up of humanitarian factors against military necessity rests with the individual conscience.

Secondly, we need changes in the current assessment system of a unit's performance. There is too much emphasis on results - such as trainfire or IPPT - because of the ill-founded belief that these results are somehow an objective indication of performance. What this in fact causes is a mad scramble for good results on paper for important tests. This compromises not only integrity but also overall training standards. Training becomes unbalanced in favour of these objective tests and the intangibles, like minor tactics, are neglected.

The moral sense on which this article has concentrated must be nurtured to provide the foundation for our participation style of management. This quality of professional commitment will underpin and breathe life into people-oriented management. Unless the whole concept of a common and just purpose can be communicated to all commanders, our new management style may remain only a series of misunderstood and sterile directives on what to do and what not to do.

In short, our army has high and tough training standards. But professionalism does not just mean the acquistion of skills. It also covers the code of ethics that is built by moral education. We cannot afford to have an officer corps which lacks moral education. We cannot afford to have an officer corps which lacks moral awareness and is only capable of a blind obedience to orders and covering up mistakes. That is all very well for a bureaucracy but an army does not win wars by showing a profit.

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Method of Instruction - How Effective are they in the SAF?

by CPT Michael Lee, LTA K. Sarvananda, LTA Stanley Wong

The aim of instruction is to effectively communicate knowledge and skills to trainees. Ask any instructor in the SAF if instruction in the SAF is effective and no instructor will commit himself with an emphatic "Yes" or "No". Until such time when an instructor can answer with conviction that instruction is effective, we will have to work towards improving methods of instruction in the SAF. Perhaps we can phrase the above questions in another manner: "Do SAF training courses effectively train our soldiers to undertake jobs they are trained to perform?" Here again the answer varies from school to school and from course to course. So how can we obtain the indicators that tell us the effectiveness of instruction in the SAF? Some good ways of doing this is to go out to the various units and schools to observe instruction being carried out and to talk to various instructors about the problems they encounter.

As instructors in SOMI (School of Methods of Instruction), we have been to various schools of the combat arms to observe how instruction and training are conducted. We have spoken to several instructors on the problems they face and we have also spoken to SOMI course trainees about training in their schools and units. What follows are some of the problems expressed by instructors in units or schools, or observed by SOMI instructors during training visits or visits by the SOMI roving teams.

- **Selection of Instructors**. Probably the most critical problem is the selection and appointment if instructors. Due to the shortage of suitable candidates, instructors are appointed without due regard to whether the officer or NCO has the aptitude or inclination to instruct. The fact that an NCO or officer has good educational qualifications does not necessarily make him a good instructor, although he can be trained to be one. We have also seen the other extreme: instructors who are unable to communicate with their trainees due to a lack of a command of the language, and the techniques and principles of teaching. Language may not be a real impediment in the long-run if the instructor has mastered the skill of communication. He can, through training, be exposed to the principles and techniques of instruction. But, the ultimate worth of the instructor will be determined by his conviction, dedication and pride in instruction. This, we fear at present, is questionable to some extent.

- **Quality of Instruction**. Instruction, to many, seems to be merely the imparting of knowledge or skills. To many it is merely a matter of feeling, or seeing and doing. But herein lies the danger. We must realise that our soldiers are beings with the same attitudes toward learning like any other student or trainee. All human beings, whether they be six or 60 or in between, need to be motivated to learn. And motivation means that the instructor should be able to arouse and maintain the interest of his trainees. The need to learn must be explained very clearly, leaving no stones unturned. The trainees must feel that the instructor has taken the trouble to really plan and deliver the lesson with any other them in mind. At the end of it all, there should be no doubts in the minds of the trainees on what is taught. The instructor must feel that he has really made himself understood and that his trainees would be able to apply the knowledge or skill he has taught, correctly and without hesitation, when the situation demands.

- **Effectiveness of** Instructors. For an instructor to do his job effectively, it is important to select personnel who are keen to instruct. They should then be allowed to carry out instructions under the watchful eyes of experienced instructions who will be present to advise, guide and correct. The company Commanders and even the Commanding Officers need to take an active interest in ensuring that this is done. Putting such instructors through an instructional course conducted by SOMI will certainly help them to be better instructors. The instructors themselves would feel that they are being cared for. This in turn would motivate them to be more dedicated and professional in their outlook as instructors. The training and development of instructors and the monitoring of their performance should be the concern of Commanders and HQs instead of relegating this SOMI. In the final analysis, the only way to ensure quality is to provide meaningful instruction and credible instructors.

At this juncture, it would be pertinent to note that many of the trainees who attend the SOMI Instructors' Course are Officers and NCOs who would not be delegated instructional duties when they return to their parent units. More often than not, they are sent to the course to gain experience which they might not put to effective use. Their presence at the course is more to satisfy a career development requirement. Training such personnel who would not be assigned immediate duties as instructors is a waste of SOMI's training resources which could be effectively chandelled to more fruitful ends.

How do we achieve effective instruction? Assuming that we have identified personnel who are keen to teach and we have taken care of their motivational and training needs, the following factors need to be considered before effective instruction can take place:

- **Service status.** While it is granted that many National Servicemen are good instructors, their talent cannot be tapped for long because of the high turnover. Just when we think they are proficient in instruction, it is time for them to leave the SAF on their ROD! This can be very taxing on the school or unit because replacements need to be found and the whole process of identifying, training and development has to be repeated. There is no end to this. The quality of instruction is not ensured for longer periods. The only way to overcome this is to identify and train more regulars to take on instructional duties. In fact, to make maximum use of the limited numbers of regulars available, schools like OCS and SAFINCOS have implemented the concept of team-teaching which have been quite successful though they are not without their own setbacks.
- **Recognition.** When we talk of status, we mean a form of recognition for those NCOs and officers who are employed as instructors. Singling them out and giving them suitable badges and perhaps letters of appointment would be a form of motivation for them to excel in their duties. It would be worthwhile for us at this juncture to note that the School of Artillery has introduced such a scheme for their instructors with encouraging results.
- **Supervision.** For instruction to be carried out effectively, there has to be some form of supervision or monitoring. This should be oriented towards improving standards of instruction with helpful comments and assistance, where applicable. In this way, instructors who are incapable or ineffective can be identified and suitable measures be taken either to correct and improve them or replace them if necessary. This is where the CO and the other officers in the unit or school have a crucial part to play in upgrading the level and effectiveness of instruction. Instead of complaining that unit instructors are incapable, it is better for the CO and the relevant officers to take positive steps to supervise and develop the available resources.
- **Comfort.** Comfort is very important during a period of instruction. It includes factors such as the size, lighting and ventilation of the location. All too often during our visits, we have seen trainees cramped into rooms with poor lighting and ventilation. Why not provide benches in the training sheds instead of making the men sit on the floor, craning their necks to look up throughout the lesson? These negative aspects do not contribute to an effective period of instruction. Yet these problems are within the scope of the CO and staff officers to rectify. A little consideration and planning would go a long way to yield fruitful results.
- **Use of aids and equipment.** Aids and equipment are very important in instruction. Attempting to conduct a whole lesson without the use of aids is to court disaster. Not only are the trainees going to be bored and lose interest, the instructor would also gain a reputation for being incapable. Opinions once formed are hard to change.
- **Maintenance of aids and equipment.** This brings us to the question of availability and maintenance of these aids. If aids are not used during lessons, then the reasons are invariably because there were not enough to go around; or, that the aids were in a state of disrepair. At one extreme is the instructor who is not bothered to use aids and equipment despite their availability. Regular checks and supervision by the CO and relevant officers should be done to ensure that aids and equipment are not only available and serviceable, but also used to good advantage.
- **Responsibility of Commanders**. All commanders at unit- and formation-levels must be sold on the idea that effective instruction is a priority and that it is their duty to ensure this. Sadly, this is lacking due to the high turnover of staff. Commanders also seem to think that the operational readiness of their units and formation takes priority.

Conclusion

In conclusion, our ultimate performance as a cohesive fighting force depends on the effectiveness of instruction. Generals and ministers may plan and decide the course of a war but we must always remember that it is the "little" soldier who has to do the winning. It is what we teach him and how effectively he is taught that decides the odds in our favour.

MAJ Michael Lee is presently Senior Protocol Officer in JID. LTA K. Sarvananda and LTA Stanley Wong have since left the SAF.

Management by Objectives for Better Management Effectiveness in the SAF

by LTC Low Yee Kah and the MINDEF Project Group

Management is defined as, "The process of planning, organising, coordinating, directing and controlling resources such as men, materials, time and money to accomplish the organisational mission."

Commanders in the SAF are also managers. They are involved in all types of organisational activities. As it is not possible for commanders to personally supervise every activity, they delegate authority to subordinates to assist in the accomplishment of the missions of their organisations Of the resources available, manpower is the most important as it is the foundation for the employment of the other resources. Thus, the SAF must adopt a management approach which aims at achieving organisational and personnel's needs in the most effective manner.

Some Weaknesses of Present SAF Management Approaches

We shall firstly look at some of the problem areas in our current management style. They are:

- **Lack of participative management.** We have lately been emphasising the need for participative management, teamwork, Work Improvement Teams and the productivity movement. All these aim to create a more open and participative management style in the SAF. Generally speaking, our management environment is still non-participative.
- **Lack of dialogue and feedback.** The degree of communication varies with individuals. We do not have an institutionsalised periodic feedback system. In an organisation like the SAF, communication is absolutely vital and we must constantly seek new ways and means to improve the climate. A message from the top sometimes ends up muddled as it goes down the chain. This creates confusion and unhappiness when people interpret the message wrongly.
- **Lack of continuity and long-term directions.** Owing to the fast rate of staff turnover and an unclear picture of long-term goals, we often lack continuity in our projects, ideas and policies. Crisis management is therefore resorted to at all levels and each person is fighting his own "crisis".
- **Lack of individual attention**. Generally, we have not been paying much attention to the development of the individual. As a result, the officers feel left out of the system. Our current emphasis on personnel development would in the long-run help to ease this feeling.

MBO as a Management Process

Management by Objectives (MBO) as a concept has been practised for the past 30 years. Although MBO is a familiar management term in the private sector, it has been used sparingly in the public sector and the armed forces.

In MBO, effective planning depends on every manager having clearly defined objectives that apply specifically to his or her functions. Each objective must also contribute to the objectives of higher management and of the organisation as a whole.

How these objectives are arrived at is of crucial importance. As Peter Drucker, a leading management expert points out, managers must either set their own objectives or at the very least, be actively involved in the objective-setting process. Imposing pre-determined objectives on managers runs the very real risk of either refusal to cooperate or half-hearted attempts to implement "someone else's" objectives.

In addition, Drucker suggests that managers at every level should participate in setting the objectives of levels higher than their own. In this way, they can get an understanding of the broader objectives of the organisation and how their own specific objectives relate to the overall picture. This relationship of each individual's objectives to the common goal is of primary importance. The main purpose of implementing MBO is to achieve an efficient operation of the total organisation through the efficient operation and integration of its parts.

When the MBO process is used, the emphasis is on trying to predict and influence the future rather than on responding and reacting to day-to-day problems. It is also a "result-oriented" approach which emphasises accomplishments. The focus is generally on improving both individual and organisational effectiveness. It is a process which requires increased participation in the management of the affairs of the organisation at all levels. Its participative management styles is one which is consistent with the needs and demands of today's society

How SAF Can Benefit from MBO

The strength of MBO lies in the simplicity of its premises that:

- The clearer the idea of what one wants to accomplish, the greater the chances of accomplishing it.
- Real progress can only be measured in relation to what one is trying to make progress towards.

   In other words, if one knows where one is heading, one finds it easier to get there, one get there faster and one will know when one reaches there.

   The SAF can benefit from adopting MBO in the following areas:

- **Direct activities towards common goals.** The primary pay-off is joint goal setting with clear ideas of common agreed goals between subordinates and superiors. Individuals can hence direct their activities toward the achievement of the goals.
- **Motivation.** Through jointly agreed goals, the individual will be self-motivated to achieve these goals. Unfortunately, motivation is a much more complicated concept. There are many factors affecting motivation. MBO is therefore only one factor that can help to motivate.
- **Reduces role conflict and ambiguity in assessment.** Through MBO, superiors and subordinates will have a better understanding of the subordinate's job and its main responsibilities. This will reduce conflicts and give a better perception of the nature of the job.
- **Provide more objective criteria to develop individual potential.** In terms of career and individual development, MBO will provide a clearer picture of the individual's strengths and weaknesses. Thus the SAF will be better placed to develop its staff and ensure that they are given jobs within their capabilities. This will benefit both the SAF and its staff, resulting in a more efficient and productive SAF.
- **Job satisfaction.** With clear goals, the individual's activities will be systematically directed and he will get satisfaction in seeing the directions of his efforts. Unproductive "going-round-in-circles" will be minimised as energy is concentrated on clearly agreed objectives.
- **Improve communication.** MBO requires frequent dialogue between superiors and subordinates, fostering mutual understanding. These will lead to better communication in the organisation.

Consideration in Introducing MBO

Because of the absence of the profit motive, an organisation like the SAF must be managed somewhat differently from those in the private sector. The key issue is whether MBO, which is believed by many to depend on the discipline of a profit and loss statement for successful operation, can be adopted by an organisation that must ultimately measure its success in terms of improving the level of combat readiness and efficiency. There are some pitfalls in the SAF which must be overcome before we can adopt the MBO system.

- **The Objectives Problem**

  This is the cornerstone of the MBO programme. Because we lack the profit maximisation and return-on-investment objective, we can have problems quantifying objectives. However this is more apparent than real. We must accept that not all job responsibilities can be easily quantified. However, this is not the reason to discard the MBO concept. Private organisations face the same problems when they try to establish goals and objectives for the managers and subordinates involved in managerial and administrative work. However, they have devised various measures to set goals and objectives for them. And it works!

- **Top Level Commitment and Professional Training**

  Without top level commitment and a proper understanding of the concept and philosophy of MBO, we will face problems in its implementation. MBO is not simply setting objectives and leaving it to the subordinates to realise the objectives. That is not MBO: it is authoritarian management! MBO encompasses the concept of participative and jointly agreed goals, with regular and systematic management of the subordinates' activities towards the achievement of these goals. The onus is not left entirely to the subordinate but shared between the boss and the subordinate. Appropriate training must be given before we can embark on the MBO approach effectively.

- **Lack of Time and Resources**

  A frequent problem with management in the SAF is the complaint of lack of time and resources. The reasons and causes for these complaints vary with individuals. We have to be realistic and accept the limitations. The issue of time management is more difficult. MBO will definitely require more time, effort and paperwork in setting goals and objectives. However the time spent on these activities will enable us to better manage our 'future' time and not waste them on extraneous activities.

- **Decreasing Behavioural Barriers**

  Misunderstanding and fear of participative management and open dialogue on goals and objectives must be reduced. A frank and open atmosphere is needed for MBO to survive.

- **Flexibility**

  MBO should not be made rigid as to preclude discussions or activities outside the stated responsibilities. In fact, MBO should trigger other *ad hoc* discussions on important matters and activities necessary for the success of the organisation.

The MBO Process

The principal considerations in managing by objectives are summarised in the following seven major steps:

- *Step 1* Review of principal areas of responsibility.
- *Step 2* Determine problems, needs and priorities in each area.
- *Step 3* Determine:

  (a) What needs to be improved?

  (b) How to achieve the improvement and what must be done.

  (c) A timetable for doing what needs to be done.

(d) What results he should be able to achieve and to express in quantifiable terms if possible.

- *Step 4* Review with the superior for agreement.
- *Step 5* Communicate with those who need to know what he is doing.
- *Step 6* Implements his plans.
- Step 7 Review and report his progress regularly.

Objective setting is the most crucial step in the MBO process. Before attempting to formulate the objectives, we have to plan the objective setting. The considerations for setting objectives are as follows:

- What is needed to fulfil the main job responsibilities today? Express it in quantifiable terms such as quantity, quality, cost, time or other identifiable standards.
- What is needed to fulfil the responsibilities tomorrow? Express in quantifiable terms as above.
- What function or activities should be eliminated? Challenge each in terms of "What does this contribute to the organisation's goals?"
- What new functions or activities, etc, are needed today? Ask "What identifiable needs or problems are not being satisfied by what we are doing?"
- What changes are needed to accomplish the objectives we are setting? More or less manpower? Changes in functions? Changes in methods or system?
- What measurements will be needed to determine how well we are performing our work with related departments? What objectives do we need to set in our work with the related departments?

An example of setting objectives for key activities of a principal area of responsibility is shown at **Table 1**

Once the responsibilities/activities and objectives are mutually agreed, the superior must regularly supervise the subordinate in the accomplishment of the goals. There must be periodic reviews to change goals/objectives in view of changes in resources and circumstances. The goals and objectives can change along the way. This is management as opposed to total delegation of responsibilities.

Conclusion

MBO is an approach to management that depends on the identification of the organisation's and an individual's objectives for a given period. It relies on defining end results, identifying the areas for improvements, planning action to achieve improvements and reviewing the outcome of the action. It motivates individuals to achieve and strengthen the subordinate-superior relationship. By introducing MBO in the SAF at the appropriate levels, commanders will jointly identify and set objectives which will be developed into a workplan. Achievements of goals set or amendments as necessary, are frequently discussed between superiors and subordinates in a congenial manner that promotes teamwork. The success or failure of the subordinates reflects on the management and the leadership of the superior.

MBO will overcome many shortcomings of the present SAF management approaches such as the lack of participative management, the lack of continuity, the lack of individual attention, the lack of dialogue and a subjective performance appraisal system. It is clearly a system that will benefit the SAF and commanders at different levels in many ways. It is a management process that the SAF should adopt.

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Towards Managing for Greater Effectiveness

by COL M S Gill

To achieve excellence and greater effectiveness, the SAF must continuously strive for more efficient utilisation of time and resources. I believe there is no lack of will and effort towards this end but the results are not always commensurate with the effort. Often difficulties arise in the translation of the will and desire into actions and the resulting consequence is that the efforts lose their productive effect and faces a high risk of "going through the motions".

In this effort, to achieve greater effectiveness the commander, the officer or an NCO, has a key role. This is not a new revelation. It has always been assumed but perhaps not always understood in terms of responsibility for direct action. The commander is directly responsible through leading and managing his command for realising the organisational objectives. The limiting factor appears to be the translation of these organisational objectives into specified desired results in specific areas.

Further, the question that must plague many a commander is not whether greater effectiveness is desirable but how it can be achieved - what are the processes and methods available that help the commander to achieve improved effectiveness not only from the personal point of view but, more importantly, for his command as a whole. The two important qualities a commander must possess to influence the performance of his command are good leadership and efficient management ability - in this context, professional military knowledge is considered a pre-requisite. While the commander is not a manager in the conventional sense, he inherently has considerable managerial responsibilities and accountability for the efficient functioning of his command.

In this article, I will not discuss the subject of leadership, not because it is of lesser importance, but my intention is to examine some management methods and processes that can help commanders enhance their personal effectiveness and consequently inject greater efficiency in their commands. The basics of management will not be discussed as anyone interested can refer to the host of books and publications readily available. I will instead try to relate some basic management concepts that can be easily applied by anyone to many current topical issues in the SAF and in the day-to-day management of their commands. While I make no apologies, I do not suggest that commanders today are not effective. However, as the degree of effectiveness is not a measurable absolute, a progressive person must view himself as still having room for improvement in his ability and skills. Commanders are not an exception to this general belief.

Managing for Results

All organisations are formed for a purpose - this is a simple truism. Organisations have corporate goals to achieve and the ultimate measure of success are the results the organisation is able to produce which contribute to the achieving of the goals. The organisational goals, especially of a military organisation, are frequently quite nebulous and abstract in the sense that they are not easily quantifiable and measurable. But this cannot be taken to mean that such organisations are absolved from the responsibility and accountability for realising their goals. Those responsible and accountable for directing the organisation must first determine where they want to take the organisation and what they want it to achieve in a particular period. This must then be translated into sub-goals (or objectives and results) which component elements of the organisation must achieve. To achieve the desired results, they have to plan and execute a sequence of actions and activities. The driving force for the actions and activities must remain the desired results.

Frequently, when desired results do not get clearly defined as a consequence of permissive objectives, the emphasis can easily shift from the desired result to the activity itself. This trap is not an entirely uncommon occurrence as it is relatively easy to concentrate on the activity and forget the desired result. However, the completion of the activity itself cannot assure the desired result. What this boils down to is that activities are

not an end in themselves but are a means to an end. The end is desired results which must determine not only the nature of the activity but also how the activities must progress.

Commanders in the SAF, as mentioned earlier, have inherent responsibilities to manage their commands to achieve the objectives assigned to their commands. This implicitly requires commanders to establish the desired results and to manage the resultant actions and activities such that the desired results are realised. Perhaps an example may be useful to illustrate the difference between activity orientation and results orientation.

Some years back a unit, in the second year of its life-cycle was programmed for trainfire revision and the lesson observed was the technical handling lesson, "Stripping and Assembling the AR-15". The two-hour lesson consisted of a lengthy lecture based on the Trainfire Lesson Format, with detailed explanations on how the AR-15 should be stripped and assembled, and ended with some practice. During the lesson, many of the soldiers did not appear to pay any attention and some were asleep. This was not entirely surprising as the lesson plan used by the conducting officer was designed for recruits doing the stripping and assembling of the AR-15 for the first time. Consequently, soldiers in their second year of National Service, who had stripped and assembled their AR-15 for maintenance probably almost every working day, were throughly bored and "switched off". Surprisingly, it did not occur to anyone that something must be terribly wrong if we need to teach trained soldiers the basics of stripping and assembling a weapon that they maintain everyday and that is dutifully inspected by someone in authority (probably some designated commander) before being put away for the day! Checks revealed that the requirement communicated to the conducting officer by his superior was "as per the Lesson Format carry on". So this became the objective for the conducting officer and "he carried on". There was no requirement for upgrading of any specific skills of the troops - not even up to the standards specified for recruits in the same Lesson Format (Lesson No. 11). The only visible result at the end of the lesson was that the troops had "revised" the stripping and assembling of the AR-15 i.e., the activity was accomplished.

On the other hand, if the unit commander had decided that he wants his trained troops to be able to strip assemble the AR-15 twice as fast as recruits i.e. 30 seconds for each action, he would have established an objective, which specified a desired result for the lesson. The whole structure of the lesson could have been different e.g. brief revision with a timed demonstration by the conducting officer (leadership by example), supervised practice by troops to upgrade skills in terms of speed, several controlled tests during the lesson (perhaps at 20-minute intervals), troops achieving the standard being allowed to fall out early (incentive), troops not achieving the standard by the end of the lesson being made to report for additional training at their time (dis-incentive of sorts) etc. The visible conclusion after the lesson would have been a well-defined standard of skill achieved by the troops giving a sense of achievement and satisfaction to both the commanders and the troops.

What I am suggesting is that "managing for results" is practical and realistic. It requires some thought to be given to establish desired results systematically which may not all be in mathematically quantifiable terms but could yet be in some subjective measurable terms. What G6-MINDEF has introduced in the design of training and the TEP (Training Evaluation Programme) is in consonance with results- oriented approach.

In conclusion here, I would like to add that this approach can be applied equally to all spheres of activities in the SAF. In the operational staff work, we learn and apply a systematic procedure in the appreciation of the situation before coming up with a plan and execute it subsequently. Except for the jargon, are the "tasks" as understood in appreciation of the situation so different from the "desired results" as used in this article? I believe that a systematic approach with well-defined objectives supported by well-developed execution plans, properly supervised execution together with efficient monitoring and control will make the SAF more effective. While the solution cannot be an instant one, managing for results is a practical and viable approach which is not only applicable for improving organisational effectiveness but can also be applied for individual effectiveness.

Participative Management

The participative management style adopted by the SAF has a direct impact on superior-subordinate relationships distinct from those typified by the the traditional militaristic management style. The participative management style adopted by the SAF has a direct impact on superior-subordinate relationships, distinct from those typified by the traditional militaristic management style.

This subject deals with the management of people, which every commander is deeply involved in all the time. Managing people is a complex business requiring much ingenuity. It is not possible to delve into great detail on this important subject in this article. I will only go into the implications of people effectiveness as related to managing for results.

As mentioned in the concluding paragraph of the previous section, managing includes the development and execution of plans. In the development of plans to achieve objectives, the basic decisions on what is to be done, when it is to be done and who will do it, have to be made. This is done by the commander charged with the responsibility of achieving a particular objective. The timely involvement of subordinates in this decision-making process to obtain consensus where circumstances permit, can greatly contribute to the development of mutual trust and confidence between superior and subordinates leading to higher commitment and enhanced motivation in the execution of plans. Is this possible? As invariably the question of this not being possible in operational situations will arise, it is perhaps appropriate to put that to rest now. It is agreed that circumstances do not permit the full participative process during battle procedure but it is not necessary if there is mutual trust, confidence and understanding between subordinates and superiors. The crux of the matter here is not so much the participative process but the development of mutual trust, confidence and understanding, and these cannot be developed quickly under the pressures of an operational environment - it takes time to develop teamwork. When can this be done? It is suggested that this can best be done during the less pressurised peacetime environment and must be done.

Though currently a system of objective setting through a participative process exists, commanders involved in the process should examine whether it is truly participative and how much it contributes to the development of mutual trust, confidence and understanding. Or does it still involve undue authoritarianism? For, if it does, the very probable consequence is likely to be resigned acceptance and an uninspired performance (which can also arise from misconceived perceptions). I believe in the peacetime activities of the SAF many opportunities exist for participative dialogues. In the area of results to be achieved, a participative process in working out desired results can have a particularly significant impact in improving people effectiveness. The commitment to achieving the desired results will be that much greater as the one given the responsibility for achieving it sees the need for it and believes that it is realistic and achievable. With continuing encouragement and support from the higher levels and the will to give it a bash at the operating levels, I believe the organisational effectiveness of the SAF can be considerably enhanced not only in terms of desired results being achieved, but also in terms of strengthening the resolve and confidence of its members. Try participative management and give it a chance to succeed - it will become self-sustaining!

Performance Appraisal

Performance appraisal is always a sensitive subject and continues to be the subject of debate in many organisations - the SAF is no exception. The main reason is that it involves considerable subjective judgement - the subjective aspects can be mitigated but cannot be entirely eliminated. In the SAF, the previous Staff Confidential Reporting (SCR) system of annual performance appraisal was the subject of considerable criticism because of its very heavy reliance on the subjective assessment of various performance criteria by the reporting officers. Besides some broad definitions for grading performance, there was little else to guide reporting officers. The inadequacies of the SCR performance appraisal system led to the revision of the system with the introduction of the of the Staff Assessment Report (SAR) format supplemented with a system of boards to moderate the subjectivity through a comparative process. There is no doubt that the current system is an improvement over the previous system. However, what I wish to touch on here is one specific aspect of the SAR format, which has yet to be formally implemented, and that

is Part II of the format - this is to be implemented for the year of assessment 1985 for the SAR to be submitted in January 1986.

The instructions of Part II of the SAR say that it is "to be completed in the presence of and after discussion with the officer being assessed". In about four months from now, reporting officers will have to sit down with those they are required to report on and complete paragraph 1 of Part II of the SAR - paragraph 1 covers job plans, targets and priorities. It may be useful to examine this now so that reporting officers, which include most officers, will have some ideas come January 1985. I am of the view that what is called for is setting objectives in a participative way and the process is as important as the objectives that are finally written into paragraph 1 of Part II. Though I can see some practical difficulties arising out of the appraisal period being out of phase with the work year and that individual objectives must necessarily be related to organisational objectives, the validity of the requirement is not negated. I would like to suggest a practical approach to meet this requirement.

Firstly, I see the need to ensure, for the completion of paragraph 2 of Part II, that objectives are specific and clear - a desired measurable result perhaps! This will avoid disagreements and morale problems. Secondly, I am of the view that about three to five objectives for a start would suffice and during the periodic review, during the course of the year, additional objectives can be incorporated. A long list of objectives will only serve to distract and make it more difficult to define priorities. Thirdly, I consider the periodic review an integral part of the appraisal process as it provides feedback to the assessed officer on how he is faring, allows the reporting officer the opportunity to provide advice and guidance, and permits the assessed officer to take timely corrective action in areas of inadequacies.

I believe the system is workable even though it appears more complicated than the previous system. The factors that will influence how well it works will be our commitment to make it work and to our subordinates. This opportunity to improve the organisational inter-personal relationship environment should be supported as the resulting mutual trust, confidence and understanding has considerable bearing on operational effectiveness.

Conclusion

In this article, I have tried to examine selected aspects of a systematic approach and the interdependence of some of the management functions that involve us during the course of our work. We have always had workplans in which objectives are always set out. This is definitely the correct approach though in some instances we could make our objectives clearer and more specific in order that the desired result can be easily grasped. A bit more care and effort on this would provide significant benefits towards organisational effectiveness.

Finally, the achieving of objectives is necessarily dependent on the individuals that make up the SAF. It is they who must get the work done. The process of translating organisational objectives to individual objectives is a natural consequence. The participative process will facilitate an enhanced sense of commitment and make the results realisable more efficiently with Part II of the SAR as a tool for this activity.

I believe some of the concepts of management by objectives (MBO) can be adopted and be of practical assistance to all commanders in managing for results, participative management and performance appraisal. I would like to urge commanders to examine MBO and selectively adopt what suits their purpose.

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Professionalism in the SAF

by BG Lee Hsien Loong

What will determine the quality of the SAF for the next 10 years? The professionalism of SAF officers and SNCOs. The quality of our people will be more important than the amount of money we spend, the type of training and infrastructure facilities we get, or the sophistication of the weapons we buy. We must thoroughly know our business, and function together as an effective, cohesive team.

We can never overwhelm a threat with numbers. Not because we know who our threat is and he is bigger, but because no matter who our threat is, it is hard to imagine that he could be smaller. Quantity is out of the question. It must be an article of faith, that with the SAF, quality is what counts.

Professionalism is a natural problem for us for several reasons. Firstly, as a national service army with two reserve divisions, we have to look after a large number of conscripts.

Secondly, we have many reservist key appointment holders in the orbat. Their military professionalism is as important as that of the regulars.

Thirdly, there is the regular cadre itself, upon whom the viability of the entire orbat depends. Regulars tend to think, almost automatically, that we are professionals. Yet we do not automatically become professional just because we have spent 10 years on a job. Are we really professional? That is the question I shall discuss in this paper.

What is Professionalism?

First, let us examine what professionalism is. There are three levels:

- The individual level - individual proficiency;
- The organisational level - system discipline;
- The organisational level - macro-competence

• Individual Proficiency

We must know our business as soldiers. Whether we are artillery men or fighter pilots, we must know our own arm - its capabilities and limitations, how it fits in with other arms, how we can exploit it, how to use little tricks to get the maximum out of our forces. First principles are easy to derive. It is easy for an outsider to read Liddell Hart or the memoirs of Rommel and make some sense out of it. But as professionals, we have done it ourselves, we have a feel for it, we know the very limits of our instrument.

In armed forces which have well-defined enemies, it has to go beyond that. Professional soldiers must know two other critical things inside out - the enemy, and the terrain. For us, it is not so simple because our threats are not so clearly identified, but in the first instance, we must know our arm.

- ## **System Discipline**

Individual proficiency is important, but I would like to concentrate more on the organisational level, because it is easy to forget that many skilled individuals do not automatically make an army. In a gang of *gongfu* fighters, each warrior may be very capable, but put together as a gang, they may not be very formidable. Professionalism has to manifest itself in the overall performance of the organisation.

The German General Staff up to World War II illustrates how this can happen. There is a legend that two German General Staff officers trained in the General Staff Academy, separately assigned the same tactical problem, would both come up with the identical tactical solution. It illustrates the extent to which the Germans were able to indoctrinate their officers, to drill them so that they all understood and applied the same analytical tools, made the same calculations, and came out with same result. It might never be a brilliant result, but neither will somebody fail the test because he does not know how to do the calculations. In a big organisation, ensuring a minimum is as important as having a few peaks in performance. The German war machine was able to work and fight under extreme conditions in war far better than the Allied war machine. Soldier for soldier, tank for tank, general for general, the Germans fought better, thought faster, reacted swifter, and won under equal circumstances.

Take the second battle of El Alamein, a great victory for Montgomery. Why? Look at the statistics 1 -230,000 vs 80,000 soldiers, 3 to 1 superiority, almost DS requirements. 1,440 tanks on the Allied side, 260 on the German, plus 280 Italian tanks, about 3 to 1; but if we count only tanks which were working and with good firepower, there were only 210 such German tanks - 6 to 1. The amazing fact is not that Montgomery won, it is that the Germans fought so well under these circumstances.

It cannot be explained in terms of individual brilliance or superhuman characteristics. It can only be explained in terms of overall organisational efficiency and competence. The German advantage was not in having better people to organise, but in being able to organise people better. Thus they out-performed others who had greater resources and talents, but could not quite put together an efficient fighting force. We do not want to lose a war, but I would rather emulate the Germans than the Allies.

The SAF is not an organisation where one man makes up his mind and everybody else follows. If it were, the problem of discipline would be simple. All we would have to do would be to do as we were told. But it is not. Instead, it is an interlocking network of cooperating decision-making agents, each one working within certain limits, having a certain freedom of action, predictability, common conventions, understandings, expectations of how everybody else in the organisation will behave. In no other way can an organisation perform efficiently, responsively and sensibly in a rapidly changing environment.

To make the network of cooperating decision-making agents work, all the agents must understand their roles, not only what they must do, but also what they must not do, and should pass along to other levels to decide. A division should be able to expect certain things of a brigade, and a brigade should be able to expect certain things of a neighbouring brigade, and of the aircraft and the ships supporting it. This will only happen if the members of the organisation work according to rules which are well-defined, although perhaps only implicitly understood and never completely formalised. A working organisation needs system discipline. If everybody is able to do that, then management by exception can work.

Management by exception assumes that exceptions will be noted, reported and acted upon. If the agents in the organisation do not understand the limits of their decision-making power, then exceptions may be noted, but may not be acted upon or passed along, and the whole network will break down.

We sometimes think of an organisation as a system which will examine a problem, make some analysis of it, decide the best course of action, and carry it out. Political scientists would call this the 'rational actor model' of organisational behaviour.

System discipline refers to a different way of looking at the organisation. It deals with the bureaucratic process, the norms, the cycles, the usual procedures of doing things - following the rules. Rules are not necessarily bad. The problem is how to make good rules, which people will enforce and abide by, and understand to be necessary for the existence of the organisation.

The KAL 007 case illustrates the idea of system discipline. When the aeroplane was shot down, you might have asked why the Russians did it, what their considerations were, who made the terrible decision to shoot it down. If you did so, you would have been applying the 'rational actor model' to analyse the problem.

An alternative interpretation of such an episode would see it not as one rational or perhaps deranged actor making a crazy decision to shoot an aeroplane down, but as the unthinking workings of a complicated air defence network, possessing established rules of engagement, guidelines for consultation, for scrambling fighters, for shooting down aeroplanes. When an infringement of air space occurs, the system just goes into action like clockwork, and it is out of people's hands. I see a blip, I report to my supervisor. My supervisor looks at it, he consults his supervisor, maybe it goes two levels up. Meanwhile, the rest of the machinery cranks into motion, fighters scramble, tail the intruder, and shoot it down. It is the way the system works, inevitable and inexorable. It was an evil deed, but there was no evil man. Every person in the organisation was just doing his duty.

That is an example of system discipline malfunctioning. But without system discipline, you would have not one KAL 007, but a dozen. Well-established system discipline will be the basis for macro-competence.

- ## Macro-competence

Macro-competence is our jargon for productivity. Productivity in the army is not about using fewer cooks to cook the same amount of food or fewer drivers to drive the same number of cars. It is the ability to deliver when we go to war. What are the goods, which we must deliver at the minimum cost? Victory, for the least amount of lives and sacrifice. Victory depends on macro-competence, the ability to orchestrate large-scale activities and to react promptly to changing situations. The SAF must respond swiftly and sensibly to threats, and cope with them before they can cope with it. It depends on the individual competence of the officers, and on the system discipline rules being well understood and well exploited by the high command.

Here is an example of macro-competence. In SCSC exercises, students draw lines and analyse courses of action. We have had this debate before: do we plan in detail and examine every move which our subordinate formations make, or do we plan in general, just establish thrust lines, and leave our subordinate formations to get on with the job as best they can contrive? These are two opposing basic philosophies. The Israelis do one, the Americans do the other. We follow the Israelis.

The argument for thrust lines is that we give him maximum flexibility. It is up to him. He is applying his mind to the problem more than we can afford to, so he will come up with a better solution than we can. We do not constrain him, or set him unnecessary limitations.

The argument for planning in detail is quite a subtle one. I once heard it expounded by an Israeli officer:

"It is not that I do not trust my subordinate, but if I constrain him, I know exactly what he is going to do, and I know that he will try his best to conform to the plan. When changes are necessary I can

change because I know exactly where he is, what the situation is and what options are open to me. I can issue new orders, and he can amend his plans and carry on. If I just give him a thrust line, when the situation changes and I want to reshuffle my forces, I will be spending the next three hours asking people where their forces are, what they are doing, whether they will be available for the new mission, whether I can change the plan in the following way. I am willing to sacrifice flexibility at the low level in order to gain flexibility at the high level. In war, it is high level flexibility which counts."

That is macro-competence.

Are We Professional?

Where do we stand? Let me tell you my personal view. I shall be frank, and highlight shortcomings. Although I do not say so, in fact many things are going well, so do not conclude after this that we are in a desperate state. Nevertheless, look at the facts as they are.

- **Individual Proficiency**

  Our officers are trained on many courses. But there are things which we cannot learn on courses no matter how long we spend on them, which we have to learn on the job, but not by osmosis alone. We think that we gradually absorb knowledge from the environment through practical experience, working, informal contacts, and a few training exercises, but informal unconscious absorption for a military officer is insufficient. It will not make a general. What we learn on courses does not necessarily deepen and get further assimilated as time passes. Unless we work at it, it dissipates and disappears. We are left with a vague memory that we have learnt this before, we think we know it, but we really do not. Although we study very hard on our courses, the great pity of it is that after we have gone into our jobs training troops and running battalions, we no longer are learning in any systematic way. Wearing a collar dot must not be like wearing an airborne badge. When we wear an airborne badge, it may not mean our parachuting skills are current. It may only mean we once attended an airborne course. But when we wear artillery collar dots, it must not only mean we once attended an artillery course.

  Recently, the Artillery introduced an officer professional validation system, much to the consternation of the artillery officers who now have to validate their competence, to prove that they can still calculate trajectories, work out gun deployment drills, and figure out support orders. It was done not to embarrass anybody, or to pass or fail anybody, but so that the officers would be able to get a self-assessment of how good they were.

  Many of the officers came soberly to the conclusion that they would have to study much more, to master techniques, formal knowledge, things which we cannot pick up just by sheer cleverness alone, or work out from first principles. There are facts to know, procedures to be familiar with, precedents to be aware of, experiences which other people have accumulated, which we cannot possibly duplicate or guess the conclusion of just by meditation and introspection.

  Therefore to become truly professional officers, we must work at it while we are on the job. We must work at it, we must help our subordinates work at it, and our superiors must help us work at it. There is a lot of scope for improvement on that score.

  The second point on individual proficiency concerns learning tactics. We are learning the rules of the game, but we have not learned combinations of the game. What we do in SCSC are the rules and principles. "If I want to mount an attack, these are my considerations:

  - I must have my forces concentrated;
  - I must have supplies;

- I must be able to take the enemy from his weaker flank;
- I must exploit onwards."

The combinations of the game are the tricks, how to make a completely unexpected move, how to sacrifice a battalion to win the battle. We have not become so familiar with our tools that we can spring these tricks on a completely unsuspecting enemy.

It is very difficult to do on a course. So much time is needed to study the principles. Even if we worked on all our weekends, we would not be able to go far beyond that into developing combinations and becoming master tacticians. Neither could we extend SCSC to a 1 1 /2-year programme to teach all these things. We must learn while doing other jobs. Is it inevitable that when we are very busy doing our jobs, we have no time to learn?

Henry Kissinger made the point in his memoirs that most people come to high office with a fixed stock of intellectual capital. As they go along it drains away, because everyday they are crisis-managing, dealing with some crazy dictator, flying off to a far corner of the world, humouring the President, going up to Capitol Hill, etc.. They never finish doing these things, and at the end of the day, they are very tired, but not very much wiser. If you really want to become wiser, and do all this, come well prepared and then go on. I would draw a different conclusion. Our officers are like senior administrators in the US government. We run around very busily, but we do not become very much wiser. But it is not that we must start with a bigger stock of capital. We must run around less, be less busy, learn better while we are working, and develop as we go along. We are not in the top administrative echelon. There is still time for us to learn.

System Discipline

How do we rate in terms of system discipline? There are three points. First, doctrines. One of the key ingredients of tight system discipline is to have doctrines which are widely known, understood and implemented. It does not mean everyone agrees with them, but everybody understands what he is expected to do, and knows when he deviates that he is doing something different. The doctrine is what negotiators and diplomats would call a 'single negotiating text'. There is one document put together, published, formalised, which everybody can study, criticise and propose amendments to. When we propose an amendment, we formulate the language, debate the merits of the case and finally, if we change the language, we know we have consciously altered the doctrine.

We have ideas on how to do things. We have concepts on how to operate division headquarters, fighter squadrons, and naval task groups, but in many cases, we do not have a single negotiating text. Those of you who are proficient in your own arms will realise how often we are like two armour officers, who have between them three armour doctrines.

The second point on system discipline is exception reporting. Somehow exception reporting does not run with the certainty that it ought to. Two examples, without prejudice to anybody, will illustrate this point.

One is the case of a rubella outbreak in one of our camps. We heard about it not because the system reported it, but because a reporter rang up from the newspapers to say, "I hear there are a lot of soldiers in Middleton Hospital. Have you got a German measles outbreak?" We checked it out, and indeed we had got a German measles outbreak. We spent the next three weeks coping with it. So something significant to the central management of the organisation had happened, but it had not been perceived as such by the decision-makers in direct contact with the problem, who were coping as best they could. They felt that this was something they could manage, not an exception which needed to be reported further up. It does not mean that they were wrong, it means that there was a difference in perception as to what constituted a significant exception. HQ thought that it was, they thought they could cope. Common expectations were not fully achieved.

A second example of exception reporting was the remarkable epidemic of finger-chopping. Soldiers chopped off their index fingers so they could not shoot, therefore they were downgraded to PES 3, were immediately exempted from being combat soldiers, became GD men serving in the Mess, and were sent out of the Army without reserve liability. About 20 soldiers did this before we realised what was going on. Some of them actually got through the system.

The amazing thing is that the direct superiors knew it was significant, and yet somehow our reporting chain was so fragile that this information could not go up, across, down to medical people who downgraded, to the manpower people who acted on this information and issued the posting orders. The people are not negligent or incompetent. These were all able, hardworking people, working the system. But the system made it very hard for all of them to be properly coordinated, for all their expectations to work, and not to have arguments afterwards: "Why didn't you tell me?" "But why didn't you ask?"

Next to exception reporting is exception handling. Not everything needs to be reported up to the highest level. Different levels can cope, and after they have coped, sometimes it is sufficient just to tell the next level that all is well. My feeling from reading reports of boards of inquiry and investigations is that although the exceptions are usually noticed and dealt with, the handling does not reflect quite the same priorities and values which should be disseminated throughout the organisation. The boards are not aware of top management thinking, of the correct guiding principles. They have acted as best they could, but we have often had to ask them to reconsider their judgement, taking new factors into account. This happens not only at MINDEF HQ, but to you, when your subordinates report to you. We have not yet established tight and reliable system discipline in the SAF.

- **Macro-competence**

I was once asked the difference between working in the army and working in the civil service. I answered that I had never worked in the civil service, but I thought the army does things faster. What about statutory boards? I stoutly maintained that the army does things faster even compared to statutory boards, because our people are action-oriented. Once we have made up our minds, we carry on. I am not sure I convinced the person I was talking to. I am not sure I convinced myself, because many times we have to console ourselves with a little tag, 'TTT'. This stands for 'Things Take Time', and sometimes things take a lot of time.

In a big organisation, hardly ever do we see a problem, react to it, and solve it permanently. More often we look at the problem, think about it, react, and wait for a few weeks to see whether the reaction actually takes place. It may not, in which case, you prompt once more. Eventually something happens, we re-assess, the problem is still there in a changed form, and we act again.

Granted, problems are long-lasting, but the time taken for the SAF to react sometimes frustrates all of us. It frustrates you when you have a suggestion to put up to the HQ, and the HQ thinks about it for six months without doing anything. It frustrates us when we have a suggestion to put to you, and you think about it for six months without doing anything. We can all remember examples of both cases. We are trying to solve a problem, and we have what appears to be a sensible, rational, fairly well-thought out solution. We put it across individually to people and they say, "Yes, I think it is a good idea, we will do it." And then we wait.

It reminds me of the day I was standing at 0600 hours on a parade square waiting to set out on a battalion route march. I looked for the man who was supposed to lead the column, and eventually I found him. I asked him, "What are you waiting for?", He said, "I am waiting for an order to go, Sir." So I said, "Go!", and the whole battalion marched off into the sunrise. I sometimes feel like that when trying to get people moving on a wider scale. I find a problem, marshal everybody, explain it to them, convince them, and then look for the man in front to whom to say "Go". Sometimes I

cannot tell who is in front. Maybe we are all arranged in a circle, and it takes a long time to say "Go". I speak to you, you say, "Yes, it is a good idea." What are we waiting for?

Some examples will illustrate how difficult it is. We have been talking about commanders' training for 2 1 /2 years. It is just getting off the ground. The idea that it is sometimes necessary to train commanders, even if at the expense of training troops, and that MINDEF will not frown too angrily if we sometimes neglect our troops to look after the commanders, is just seeping through. Even today, if just half of our officers understand all this, we will have done well. That is the nature of big organisations. It takes a long time to put across perceptions, and even longer to put across motivations.

We talk about support company training. Everyone agrees that the infantry battalion headquarters tend to neglect the infantry support companies, and often do not know what the support companies are doing. We tell them to do support company live firings, to shoot, but they do not shoot. So we ask, "What is the problem?" No time, no ammunition, no expertise, no range, no this, no that. We provide one at a time, and each time we provide, there are three more problems left. The next time we provide, there are still three more problems left. Eventually it is like killing the Hydra, putting a flaming torch to the heads we have just chopped off, so no fresh heads can sprout while we chop off the rest. At last, we are succeeding.

Ought we to be satisfied with ourselves for being faster than the civil service? Are we in fact faster than the civil service? Faster than the statutory boards? Macro-competence is something to be worried about.

Let me finish this assessment on two optimistic notes. Firstly, we have made progress in one critical aspect. We know what not to covet, a sign of maturity. We wear uniforms, and think of ourselves as knowing all our business. We put up requirements to our superiors. Once upon a time, we would ask for the earth. "I need so many aeroplanes, I must have so many tanks, divisions, aircraft carriers." And if somebody turns to you and says, "But do you really need all these to fight a war?", then you put your hand on your heart and swear, "If I do not have all these, Sir, I cannot in good conscience go to war. My soldiers will die. These are operationally essential". So the poor decision-maker, confronted with the subordinate telling him on his professional judgement that everything is operationally essential, approves with a heavy heart, and the money sinks before the aircraft carrier arrives.

We are past that stage. Now when we say the following is what we require, we often are also in a position to say the following is what we do not require. We have evaluated this, it is very desirable, but we know our requirements, and in all good conscience we can say we do not need this. So we can save the money for something else which we do need. We accept, even though sometimes reluctantly, that operational requirements are not absolute. If it costs too much, we do not want it. Sometimes even if something is cheap, we may not want it. This is a telling indicator that all is not amiss in the SAF.

The last point of my assessment, to balance what you might consider a gloomy picture, is that none of this is intended to be a reflection on anybody. I am not saying anyone is incompetent, that you are wrong or that we are wrong. What I am saying is that our system has not been able to make ordinary people do extra-ordinary deeds. It has not been able to make fallible people into an infallible organisation. We are us - ordinary people, a fair cross-section of the Singapore population, a fair cross-section of Singapore talent. We work as hard as other people work, and yet when we look at the outcome, we are still unsatisfied. Why? The reason is not that our people are inadequate or lazy, but that we may not be professional enough.

What is the Problem?

Why are we in this state of affairs? Let me go through a series of possible explanations. Some I believe, some I do not.

The first explanation is that we have the wrong pre-occupations. We have to look after the parades, displays, SAF Days, routine training, and employers' visits, so we never have time to do the right business. Perhaps it is part of the reason, but is it a big part? I know from personal experience that people prefer to do what they know how to do, rather than what they need to do. It is a natural human failing. When it comes to professionalism, this has happened on a large scale. Of course employers' visits and parades keep us busy, but we must not do it to excess just because we know how to do it. Raising professional standards and knowledge is much harder. The tendency is to put it aside until we have time, and conveniently we do not have time.

The next explanation is that we are not clever enough. I doubt it. The Germans proved in WW II that even after years of war and carnage, when many of their best and brightest had been killed, they could still put together a formidable fighting force. Therefore it cannot be that we are more stupid than other people, only that we need to be better organised.

Of course, not everybody is equal. Some do more important, some do more confined jobs, and we have to use our talent wisely. The Germans did it with the General Staff system. The best 10 percent would be General Staff Officers. Every commander owned one. He was a valuable asset. If the commander wanted any job done, he gave it to the General Staff Officer. At the same time, the General Staff Officer had his communication network, a link to the General Staff Officer at the superior headquarters. Thus throughout the hierarchy there was a complete parallel nervous system, which communicated new ideas, new discoveries, new directives, and which made sure the system worked.

We are all short of able people, and we must put them in the right places. My feeling is that the general calibre of our officers is alright, but we need a few more of these critical nodes who are able to transmit and transmute impulses rapidly and accurately, interpreting the data and sending them out again. We have tried to do that with our Wranglers.

Commanders, by temperament and by job necessity, have to be dissatisfied, especially with our officers. We tend to judge our subordinates by our own strict standards. It is reasonable for a commander to look at all his officers and say, "All of them are not equal to me," but that does not mean we are not good enough. If we look at it from a higher plane, we would say, "They are different from me, but for their job, they are more than adequate. Without them, I would not have any job done at all."

The third possible explanation is that we have no critical mass. We need to form a core of exceptional people to sustain standards and carry the rest along. With a large number of people, there will be amongst them a critical mass of talent which can galvanise the entire group. Not only brains, but other skills as well. We need people with all kinds of particular talents who can run the different specialist organisations.

It is difficult for us to maintain the standards of our armour training. Not that our soldiers are any poorer gunners than the Israelis, but the Israelis have such a large group that amongst them there will be the naturally talented ones whom they can pick out and appoint the master gunner. He will then make sure that all the rest can shoot.

They may not all become master gunners, but certainly they will be competent. In time, another man will by chance have the correct combination of talent and inclination, and will become a new master gunner. We have a small pool, so we find a master gunner minus. He trains a few other gunners, not all of whom have the highest talent, and if by chance that group does not include somebody who is absolutely up to the mark, then the next master gunner will be master gunner minus-minus. So our standards go down.

Another reason we need a critical mass is to produce mavericks. The organisation cannot be all made up of conformists. Mavericks keep the organisation lively. How did the Germans before WW II come up with the blitzkrieg technique? Guderian was an upstart, one talented person against the organisation. But when his idea was accepted, there was a tremendous pay-off all round. It depended on one man with a different idea. We do not have enough mavericks.

The fourth problem with us is that we are not communicating enough. Communication is the essence of management and leadership. We are trying to communicate our ideas to an audience who are sceptical, uncomprehending, and perhaps unconvinced. It is very difficult to overcome all these hurdles, get them on our side, and finally have them go out as our proselytisers, telling others, "Yes, the colonel spoke to me thus and so, and I think the colonel is right. Why don't we change, and do the following instead." Colonels do not get ideas accepted simply because they are colonels, neither do majors, neither do captains.

We do not know how to communicate, not directives and instructions, but nuances, intentions, purposes, the thinking behind an order, why we want people to do commanders' training, or why we must have leadership by example. There must be very close rapport for all these nuances to get through, and for feedback to be received. When I ask someone for his view, sometimes he says, "No, I cannot tell you because otherwise I may get into hot water." We have to reach a position where we can talk in a relaxed and half-serious fashion, what I call technically "after the third beer". This speech is a case in point.

Sometimes when I am telling you something, I have to ask you to assume that I have had three beers, even though I have not, because I am telling you as a friend, and I hope you will also tell me as a friend after pretending to drink three beers. Then we can speak frankly. Neither of us will be fully held accountable for what we have said, but the meaning will be communicated. It is a necessary technique. Traditionally, in the army you stand to attention to hear what your commander has to say, and then you go out and wonder, "What did he say? Do I remember 30 percent of it? " We are not communicating enough.

It happens at every level. I once did a psychological test which classified my management style. I could be an executive, a bureaucrat, a benevolent autocrat, or a deserter. I had a very high deserter score. To find out why, I re-read my answers. I found that on all the statements which said: "If my commander disagrees with me, I will listen to him", "If I have something to tell my commander, I will tell him", "If I have a disagreement with my commander, I will make a serious effort to see his point of view", I had answered "I never bother", which shot up the deserter score. That was a revelation. After that I considered very carefully: Is this really how I behave? So I tried to change.

Many of us have this problem. You will say, "Well, my boss does not understand me. I have my frustrations, and he has his values." How often do you say, "I do not understand my subordinate. I have my values, and he has his frustrations?" You don't, you think you are alright. It is very difficult to appreciate that you are not communicating enough, and to try to change the organisational climate so that you begin to communicate enough. If we can do that we will achieve better system discipline, and a much more macro-efficient organisation.

The last and critical reason we have not done very well is that we have not had a sufficiently well-defined common vision. This is reflected in the earlier statement that we do not even have single negotiating texts for doctrines. We need a clear idea of what we are developing towards, what MINDEF will be like after five years, what the SAF will be like in battle. It is very difficult to dream up a vision, to articulate it, and to have it accepted as legitimate. Only a prophet can do that, and we need one in each generation. The lack of this vision had hindered us for a long time.

Connected with this lack of a common vision is the question of goal stability. We change, we have new ideas, we try to implement, we are in constant ferment. Ferment is good, because stagnation is worse. We have been in ferment for a long time. We have our ideas, we have our predecessors' ideas, and our successors will have their ideas. How do we constrain ourselves so that we are not stifled by what we have inherited, neither do we throw away the house into which we have just moved? We all have our own clues as to how

to do things. "If I were there, I would do it differently." Sometimes we are there. If we manage to do it differently that may be good, if we manage to do it the same, that may not be a bad thing. It all depends.

There is value in change, but there should also be value in stability. Recently I had to recommend choosing between option A or option B. I had already chosen option A a few months ago, given 50 percent of the information. Now 40 percent more has come in, and it looks like option B is the right answer.

Should I back-track, undo option A and switch to option B, which appears slightly better? I reasoned that it is like choosing a bride -you look around and you meet so many girls, and eventually you settle for one and marry her. The next day another nice girl comes along, slightly better. What do you do? If you are wise, I think you will stay married. I recommended to stick to option A. Since then the last 10 percent of the data has arrived, and it has vindicated my choice.

This is how our decisions have to be. You already have a decision which is not optimal, but near-optimal. There is a better one, but there is a very high cost associated with changing. Our inclination is to say change and absorb the cost, the long-term benefits will be worth it - but the long-term never arrives.

Can We Do Better?

Those are some of the reasons we are having problems. What can we do about it? Firstly, we must persuade officers that training does not begin or end in courses, that commanders must educate not only their officers but also themselves, that we must be interested, we must speak out, we must not be afraid to disagree, we must not be complacent.

We do not have enough of a critical mass. We cannot expand the army to recruit 1,000 more men, and hope that one of them is Guderian. But we hope perhaps to bring in 20 more promising men, out of whom, one might be Guderian. That is why we are recruiting more better quality officers. It is not to supplant jobs. We are looking for the ferment, the yeast, the sparkle which will leaven the entire organisation, and make out of ordinary human beings, good staff officers and good commanders.

I have been fortunate in my subordinates. They were not always my choice, but they were the ones who were given to me. I have always felt that how a man performs is a reflection on his superior. He is not a bad man, but perhaps his superior does not know how to handle him, how to use his ideas, how to bring out the best of him. One man not up to his job in a critical appointment can demoralise 50, 100, 1,000 subordinates. It is therefore in the vital interest of all of us, the followers as well as the leaders, to have able, dedicated, high-flying, high-profile people who will be the leaders, in these key appointments, who will bring the rest along, and make the best out of us.

Secondly, communicate and encourage an upwelling of ideas.

Thirdly, foster stability. I spoke to you about the new broom syndrome. The thought I would like to leave with you is that three brainwaves a year is enough. If you have more, keep them to yourself for the time being, look at them again next year, and if they still seem to be good ideas, then implement. It is a big organisation, and people need time to adapt and react. It is good to have a lot of ideas, but choose carefully what you want to focus on, so that there is time for the results to show. Otherwise, you will be in a situation which often confronts commanders in war-games and in war. Brigade to be committed on the west, situation changes, brigade commit to the east, STOP! brigade go back west again. The Grand Old Duke of York 2 knew all about this, as much as Sun Tzu and Clausewitz. Remember, you think about 1,000 times faster than the organisation can possibly change, even if it is a good organisation, so take that into account.

Conclusion

This is not a problem with a simple solution. It will not go away quickly. We will be addressing it over and over again. I asked Commandant just now whether CGS did not come to speak about this a few years ago in

the Staff College, and he said, "Yes, but that was many years ago, and this is a completely different crowd." But it is the same problem. So I have no doubt that in five years' time this conversation will be repeated here. Meanwhile, we have to try to make it work.

How? Believe it can be so, and it shall be so. Because for people to change, to do things, to achieve great deeds, you must first believe that it can be done, and that it is worthwhile doing. Only then will you see that what you imagined to be difficulties can actually be overcome. So believe that it can be done, believe that it is within our capabilities to be professionals, to become collectively far more than we could possibly be individually, and we will create the atmosphere which will make it possible.

Original version delivered as a talk to SCSC students at Commandant's Evening on 28 June 84.

Acknowledgements

Endnotes

1. The figures are taken from Liddell Hart, History of Second World War, Chapter 20, pg. 298.

2. The Grand Old Duke of York

He had ten thousand men.

He marched them up to the top of the hill,

And he marched them down again.

When they were up, they were up.

And when they were down, they were down.

And when they were halfway up the hill,

They were neither up nor down.

BG (NS) Lee Hsien Loong is presently the Deputy Prime Minister.

Security for Small States

by 2LT Choe Tse Wei

The world has never been a very safe place for small states. It has become even less so with the advent of superpower rivalry, ideological conflicts, scrambles for mineral wealth and international terrorism in the decades after World War II. History has shown the evident ease with which larger powers have manipulated countries weaker than themselves either economically or militarily. World history chronicles the stories of smaller states haplessly swallowed up by larger ones, whether in the days of Prussia or in the deserts of the sub-Sahara.

Yet there have been instances where this has not happened, where certain small states have managed not only to survive as independent and sovereign entities, but also to flourish politically and economically amidst much larger countries. Switzerland is one long-standing example of this instance, and she has since been joined by Costa Rica, Israel, Singapore and a host of other Pacific and Caribbean micro-states.

This article will comment on the evolution of the small state in the decades after World War II, and outline the factors which have enabled some of these states to thrive in the world community despite their size.

The Evolving Concept of the Small State

The concept of sovereignty and self-determination for small states has undergone an evolution over the past several decades. Prior to World War I, any country weak and vulnerable was easy prey to an opportunistic large power. Even Imperial China under the Manchus was an easy prey to the colonial powers of the West.

World War I and President Woodrow Wilson ushered in a modification of this traditional "free-for-all" attitude adopted towards less powerful nations. The Wilson Doctrine stressed the inherent right of all people to self-determination. This new concept gave support to the concept of a "small state" - a concept which had not seemed possible in the harsh climate prevailing in world politics. No doubt, in the period immediately following the enunciation of this policy, there was still little change in the plight of small states. Nevertheless there was now introduced the important concept that a small state did deserve the right to exist independently, free from the bother of any larger country. In other words, freedom was a right of every country, large or small, and it was no longer a privilege granted by a larger country to a smaller one, as and when it pleased to do so.

However, before this concept could be applied, the world was once again torn apart by the trauma and horrors of another World War. It took another great war to drum in the urgency of peace for all.

After World War II, the period of decolonisation together with the establishment of the United Nations allowed the concept of a small state to come to fruition at last. Large numbers of former colonies became independent, and the UN saw more and more nations of nominal size joining it for example, countries like Ghana, the Ivory Coast, Cambodia, Guyana and Singapore.

But the issue of independence did not stop just there. Although these states are all technically independent, that is, they all have a seat in the UN, sadly, many of them soon sank into the quagmire of internal revolt and foreign interference. Some quickly lost the independence they had yearned and worked so long for. Many grew disillusioned with independence as it turned out not to be the Utopia they had hoped for. Yet, among this litany of sad tales, there were a few happier sparks to light up the scene. A few states did manage to maintain independence, economic growth and enhance security.

What made the difference between the small states which sank and those which swam? Luck played a part, to some extent, but hard work and sensible policies were what really mattered. This article looks into the factors which helped guarantee peace and security for the more fortunate of small sates. It also evaluates the price at which this security was obtained and concludes with a comment on which of these factors form a cost-effective foreign policy for a small state living in a dangerous world.

Military Defence

"Let him who desires peace, prepare for war."

- Flavius V Vegetius

The establishment of a credible defence force remains one of the best means by which to guarantee security against external threats. The rationale behind the creation of such a force is summed up succinctly by the term "poison shrimp strategy". Here, a small nation is compared to a small shrimp in a sea where fish of varying sizes can be found. It is powerless against a large predatory fish (that is a great power) but it can still poison any smaller fish (that is smaller aggressor) that might wish to swallow it. In other words, "the poison shrimp strategy" aims to make invasion so costly for the aggressor as to make it unprofitable from the economic or strategic viewpoint. This ensures that the shrimp will remain safe from aggression. Military deterrence along these lines of reasoning have formed the crux of the security thinking of the most successful of today's independent small states like Israel, Switzerland and Singapore.

The determination to use the forces, if forced to, is equally responsible in warding off aggressors. This is underscored by a Swiss anecdote dating from World War II. It was said that Hitler's general, Hermann Goering, toured Switzerland prior to World War II and whilst inspecting a Swiss guard of honour, stopped to speak to one of the Swiss soldiers.

"How many soldiers does Switzerland have?" Goering asked.

"One million, Sir," replied the soldier.

"What if Germany sends two million soldiers to invade

Switzerland?"

"Then each Swiss soldier will shoot twice, Sir."

Suffice to say, history has shown that Germany never touched Switzerland at all during World War II.

Defensive might plus the will to use this might, if need be, is thus a major factor in ensuring peace. It has the quality of being almost totally within the control of the state concerned. After all, the quality and size of one's defence force is determined by how much money and effort one is willing to invest in it, unlike other policies, for example, foreign relations which require the co-operation of other countries not within one's control before they can begin to work. Consequently, defence is usually the most trustworthy factor to a country's security.

Having a credible defence force also allows small states to take advantage of the competing interests and manoeuvres of the superpowers. If attacked, it must be able to resist any such action long enough to bring about an effective response from the superpowers.

Where small states are concerned, the maintenance of a credible defence force takes a few facets. Firstly, the institution of a citizen's army through national service is seen as necessary to ensure a large pool of trained soldiers easily mobilised in a crisis without constituting a large drain on the national economy's

labour force in peacetime. All of the successful small states practise this to some extent. Israel, Taiwan, Switzerland and Singapore all have well-known and well-funded citizens' armies that are considered crucial in the maintenance of their deterrence capability. They all stress quality to compensate for smaller numbers, for instance, the quality of men, mobility, morale, training and equipment.

Secondly, efforts have not been spared in purchasing adequate defence materials for use by the citizens' army. All four nations mentioned above are known to have bought, or manufactured, weapons of good quality, if not state-of-the-art, for their forces.

Thirdly, it requires the establishment of sufficient back-up armaments allows industries to modify, assemble and manufacture weaponry in case foreign supplies are cut off. Taiwan and Israel, with limited links with other countries, tend to rely heavily on domestic arms manufacture. Switzerland has the renowned *Oerlikon* arms manufacturer. Sweden has *Saab* and *Bofors*, whilst Israel has the Israeli Air Industries.

Fourthly, all these countries actively encourage their population to support their defence forces and hold them in high public esteem. The institutions of the armed forces are generally respected and this moral support permits the defence effort to continue with little social resistance or legislative hindrance.

But building a strong defence force has one drawback. Often the development of a powerful defence force has evolved at the expense of the growth of the economy. When a significant proportion of the limited resources of a state's Gross National Product (GNP) is laid aside for defence expenditure, then that amount will not be available for use in improving the living standards of the population as a whole. This situation is commonly referred to by economists as the "guns or butter" situation. A good illustration would be Israel. Undoubtedly, the possessor of the finest defence force of any small state, Israel also suffers from a problem-riddled economy with triple-digit inflation, double-digit unemployment. She relies heavily on the United States for financial assistance in propping up her defence spending. Sweden, too, has had to divide her resources between social welfare expenditure and defence spending. Consequently, though Swedish social welfarism is highly developed, the country does not yet have the anti-submarine capability necessary to ward off the Soviet mini-submarines that frequently intrude into her territorial waters. Conversely, Japan has been able to thrive economically because her defence commitments have until recently, been at a relatively low level of one percent of her Gross Domestic Product (GDP).

Another problem posed by a strong defence force is the potential this has for arousing resentment amongst neighbouring countries. Israel and her Arab neighbours have never been friendly anyway, but her strong and active army provides an added barrier to reaching a Middle East peace settlement. Only Switzerland has had the good fortune of having friendly European neighbours who have long accepted her vigorous defence policies.

Diplomacy

Diplomacy, the art of making friends, remains an important means by which a small state can be secure against external threats. Since it cannot hope to win any major conflict on its own, the small state must therefore endeavour to win more friends in order to reduce the chances of conflict. To this end, countries like Switzerland, Austria and Singapore have striven to be at peace with nations from all ideological backgrounds. They profess neutrality with regard to most issues not affecting their immediate interests. In fact, Switzerland goes to the extent of refusing membership in international groupings like the UN or the EEC, much less in any military alliance. She adheres to a strict policy of sitting-on-the-fence in peace, and she will deny the forces of both East and West the use of her territory or facilities in wartime. By this, she has managed to escape the ravages of two World Wars. To varying degrees, this policy of diplomatic neutrality is followed by other small states like Finland, Singapore and many of the micro-states of the Pacific and the Caribbean. Only small states with powerful armies can afford to take sides in world politics. Even then, like Taiwan, they need to be supported by the US, a superpower.

However, even neutrality and diplomacy have drawbacks if used as the only means of keeping peace because eagerness to befriend can be interpreted by hostile neighbours as a sign of weakness. This applies to countries both large and small. In 1938, Britain's Prime Minister, Neville Chamberlain, met Nazi leader, Adolf Hitler, in an attempt to talk peace. Chamberlain returned to London happily proclaiming he had achieved "peace for our time... peace with honour", but Hitler did not interpret it the same way. Thinking that Britain was not prepared to stand in Germany's way, Hitler annexed Czechoslovakia and began the invasion of Europe. Similarly, the 1982 Falklands conflict began because Argentina thought Britain would not resist the Argentine annexation of these islands.

Elsewhere, excessive pre-occupation with neutrality has led to instances where a country has so much respect for another that her foreign policy is tailored specially to avoid offending the other country. In this instance, we see that the original aim of neutrality degenerates into one of accommodation and appeasement.

To be truly effective, erstwhile diplomacy should still be backed up by a credible army. This would thus be the practical embodiment of Theodore Roosevelt's call to "talk softly whilst carrying a big stick". The combination of diplomacy and defensive capability gives double incentive to the other countries to stay at peace with a small state.

Multi-lateral Involvement

One novel way to ensure peace is for a small state to promote "multi-lateral involvement" in its own security. It is essentially a balance of power strategy which seeks to have all great and medium powers of both East and West to have a strategic and economic stake in the continued existence of a small state. This method of guaranteeing security was used in Siam by her rulers in the last century, and it proved effective enough to make Siam the only Southeast Asian nation to remain free from colonisation. This method is also used by Singapore today to ensure that both East and West will want her to stay independent in order to preserve their own vested interests here. One of the basic tenets of Singapore's policy for survival is to develop a balance of power structure conducive to her continued security. This depends on the superpowers being convinced that:

- Singapore is of considerable strategic and economic value to each of them.
- The direct interests of each power can be served without bringing her under anyone's sole domination.
- The interests of each power can be preserved only by preventing the domination of Singapore by other powers.

Consequently, Singapore has worked to make herself a neutral centre of trade, commerce, communications and finance useful to all powers, and capable of absorbing and integrating their presence and influence. She encourages these foreign interests to compete so that none of them will attain a dominant position. An Assistant-Secretary at the Singapore Ministry of Foreign Affairs states this policy quite accurately when he wrote:

"Since time immemorial, external forces have exerted themselves on the lands and peoples of this area: it would be idle to wish for a cessation of outside involvement in the region, in one guise or another. As of now, there seems little prospect of a complete withdrawal of the major powers from Southeast Asia strategically, economically or diplomatically. Rather than try to keep out all outsiders, therefore, it would be better for as many interested powers as possible to come in and develop a stake in the region, thereby ensuring that no single power gets into a dominant position".

To date, this policy has been effective in ensuring Singapore's security. The only disadvantage being that it requires a country's leadership to walk on a tightrope, forever having to balance one influence against another in an effort to maintain the delicate equilibrium in the balance of power.

Alliances

"Tis our true policy to steer clear of permanent alliances, with any portion of the foreign world."

- George Washington

Alliances have always been a means by which countries buttress their security with the co-operation of others. Disregarding the need to form alliances and preferring instead to rely on the size of her army, a small state will never really be in a position to engage in a long-term conflict with her much larger enemies. The most she could do is to put up a spirited resistance that would be costly to the aggressor. An alliance, then, would enable her to draw on the strength of more powerful allies.

For Luxembourg, membership to the North Atlantic Treaty Organsation (NATO) is crucial to her security. Israel and Taiwan have historically relied on the US for help in times of crises. Singapore and Malaysia are associated with the rather informal Five Power Defence Arrangements.

Nonetheless, it is also apparent that Switzerland, Austria, and Sweden have no alliances whatsoever, preferring instead to rely on a policy of utmost neutrality to ward off hostile attention. This points to a conflict in the various ways of ensuring security: the policy of neutrality runs counter to the policy of using alliances as a means of providing security from external threats. Both methods cannot be embraced simultaneously, and both methods are not in themselves wholly foolproof. Neutrality is viable only if a superpower chooses not to attack and alliances work only if their signatories do not change their political fancies overnight as they are usually wont to do. History is littered with examples of failed alliances and shattered friendships. Alliances work best when no strain of self-interest is placed on them. Given a war, they soon crumble to pieces as friends grow scarce in the actual hour of need. In addition, in an alliance between a small and large state, the former frequently has to abide by the wishes of the latter in exchange for protection. Sometimes, the small state finds itself a de facto vassal of the larger one, having to make concessions in her foreign policy in exchange for protection from the larger state. This has indeed been the case for the Cuba-USSR and the Warsaw Pact alliances, where the smaller states have become client satellites of the USSR.

The UN and Other World Forums

Although the UN has often shown itself to be unable to arrive at or implement solutions to the world's political crises, it still has a role to play in safeguarding peace and security for small states. In this respect, the UN functions, firstly, as a forum where small states can present their problems and interests for discussion. Secondly, it serves as a channel for multi-lateral aid from the industrial to the developing states. Finally, it is a convenient place for small states that cannot afford a large network of embassies to maintain contact with as many countries as possible. In short, the UN and other international organisations like the British Commonwealth play an important part in helping to air grievances and defuse tensions before these can threaten the security of small states. It was UN mediation that helped bring peace to Cyprus.

Internal Political and Social Stability

The racial, religious, social and ideological conditions of a given nation will determine its internal security and also its ability to withstand external threats. Small states with closely-bounded societies enjoying domestic harmony are clearly more resistant to security threats than those with class-enmity, racial tensions or internal schisms. One need only compare tranquil Switzerland and New Zealand with strife-torn Sri Lanka to realise the truth of the above statement. Since the decay of a society is usually the first stage in the eventual loss of a nation's security, this factor is extremely important when we consider the criteria needed for a stable nation. Clearly, the saying "united we stand, divided we fall" has much relevance to the security of any nation.

Economic Growth and Strengths

The economic health of a nation influences the security outlook in no small way; not least because a good defence force requires a sound economy to support it. Furthermore, a nation with a good standard of living and a thriving economy is much less likely to fall prey to internal unrest and external interference. Taiwan, Singapore and Switzerland are examples of states with healthy economies that contribute to stability and peace. They can utilise their trading links with the world to enhance friendships and improve regional ties.

Geopolitical Significance of a Nation

Sometimes, it may just be possible that a nation can remain relatively secure simply because she has no real geopolitical value to any major power. She would have nothing to offer any power in terms of sea control or the establishment of military bases. This seems to have been the case for many of the isolated mini-states of the Pacific and Carribbean island-states like Antigua, Barbados and Micronesia which have populations of only a few hundred thousands and economies which concentrate on plantation agriculture and tourism. These beautiful islands are blessed with relative calm because they are not blessed with much else of any strategic value.

Nonetheless, it is worthy to note that Falklands, Grenada, Vanuata and Fiji were formerly also 'unimportant' mini-states that rapidly assumed immense international significance simply because political changes affected either their own politics or the politics of their larger neighbours.

Conclusion

Every nation must select those policies which are deemed most compatible with that nation's regional and domestic environment. In making the selection, cool-headed pragmatism and sensible evaluation are needed. Only then will a nation succeed in having a foreign policy that is effective in preserving security. Only then will a country avoid the fate that usually befalls smaller and weakerplayers in world politics.

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A History of Tanglin Barracks: The Early Years

by MAJ (DR) Low Wye Mun

It is when I found occasion to work late into the night that I first heard the voices.

First there would be noises. Movement of feet and metal-studded footwear, creaking wooden floorboards. And then the voices would start, cries of the sick and tormented reverberating through the emptiness of the building. Empty indeed, for no one else remained in the office by this time of the night. Only the voices, and the haunted.

I paid little attention to them initially, but as time passed and following the decision of MINDEF to vacate the Tanglin site to move to new and modern premises, the voices became more frequent, more insistent. As if aggravated by the new buildings starting to assume shape and form, and the intensifying preparations for movement away from Tanglin, the voices rose in like intensity.

It was becoming increasingly discomforting to work with all the interruptions; and just when I'd decided to shift my work home, a peculiar thing happened: the voices softened. Oh, they continued, certainly, but their character had changed to that of muted suffering, of mournful plea.

And that was when I understood: these were the cries of The Forgotten.

They were appealing for the dignity of recollection, of remembrance, and perhaps even of reminiscence. They were pleading for their story to be told before, with the passing of more time in the headlong pursuit of the future, they, buried in the past, were heard no more. And as their chosen scribe (whom I assumed I was, having heard no similar hauntings amongst my peers), I felt compelled to relate their story.

In so doing we might all be reminded of our beginnings in this tropical island, our military heritage notwithstanding. And as we harken to our past, perhaps the voices will be subdued if not stilled.

The history of the Tanglin Barracks is very much a part of the history of Singapore.

Four years after founding his "emporium and the pride of the East", Raffles returned to Singapore in what was intended as a brief and last visit. Encouraged by the activity and industry that greeted him, Raffles soon re-asserted his personal authority over the island. He revised the layout of the town and made changes to the distribution of land among the various groups that made up Singapore's population at that time.

Thus was the city's commercial centre firmly established on the western side of the Singapore River. To the west of this was Chinatown, home to those of Chinese descent. Pieces of land were also allocated to the various races for the purposes of conducting their business and trade. For many of the Chinese, the Teochews in particular, this meant agricultural practices.

It was in fact primarily the Teochews who became dissatisfied with the amount of land allocated to them. Defying the difficulties, risks, and uncertainty of the island's jungle-shrouded interior, the pioneering Chinese expanded away from the settlement at the river's mouth and cleared land to plant pepper, gambier, and nutmeg crops in sprawling areas.

One such area, known as "Tanglin" from the Chinese words meaning "east hill peaks", was the site of extensive nutmeg-growing. Europeans such as Cluny, Claymore, and Tyresall, soon realised the profits to be gained from such crop cultivation. By providing the overall management of these crop-cultivated areas as well as capital for the Chinese workers, they built up plantations which soon extended up to the Bukit Timah

environs. In order to service these plantations and their owners' villas, roads were built from the main town. By the mid 1800s, the flourishing nutmeg and pepper plantations were very much in evidence, that of William H. Willan being more fortunate than most, being linked by Orchard Road and Tanglin Road.

This fortune, however, was not to last. In 1857, the nutmeg plantations of Singapore were devastated by a blight. Amongst other developments, it led to a downswing in the economy of the island. This was to prove fortuitous for the military planners of the island. This was to prove fortuitous for the military planners of the island.

Concern over Singapore's defence needs had been repeatedly voiced by military officers assigned to the island. But even the best efforts of engineer officers like Lake (1827) and Best (1843) to lay out the defence requirements, including plans for fortifications in and around the island, were met with complacency. Only the outbreak of the Crimean War in 1854 succeeded in convincing the India-based government of the island's vulnerability.

In response to requests made to Calcutta by the Singapore Governor, Edmund Blundell, approval was given in 1857 for the purchase of two pieces of land:

"... the smaller piece being situated to the northwest of the town and cantonment of Singapore and in the immediate proximity of the main roads leading into the interior, for establishing a military post and eventually a fortified site..."

The 210-acre site in Tanglin, comprising the majority of Willan's nutmeg plantation, was bought at a modest sum of 5,500 rupees, with the intention of providing housing for military troops on the island. Little did the original planners envisage that this would form the seat of Singapore's Defence Ministry some 100 years later.

In 1858, Collyer was despatched to Singapore to plan the defence network for the island, also referred to as "Fortress Singapore." Then a Captain in the Madras Engineers, he rose to become Chief Engineer of the Straits Settlements, holding the rank of Colonel. Amongst his projects, which included Fort Canning, Collyer was resposible for the "erection of the attap barracks for European troops...at Tanglin."

It was only in 1860, though, that the Tanglin site was actually purchased. In Despatch Number 894, the Resident Counsillor of Singapore was instructed:

"... to take the necessary steps for securing the piece of ground at Tanglin..."(dated 6 March 1860)

In subsequent correspondence, the first mention of "barracks" was made in conjunction with this piece of land (Official Memo 152 dated 28 March 1860).

And so it was that the construction of Tanglin Barracks commenced in 1860.

It is likely that Indian convicts were used to carry out the construction of the barracks, this labour force having been responsible for the building of Fort Canning, Government House (the present Istana), and the paupers' hospital of Tan Tock Seng.

The original buildings were large, airy structures with wooden floor boards raised on piles some four feet above the level of the surrounding ground. An open verandah ran outside all four walls of each building, while an extensive roof constructed of attap covered the entire building structure with several feet of overhang. Numerous windows and doorways opened onto the building from all sides. This style of construction was in line with the general design of houses built by the local inhabitants. It afforded the user as much respite from the tropical elements as possible while providing maximal opportunity for "through" ventilation.

The individual buildings were linked by dirt tracks that had to becleared through the low-lying scrub and vegetation.

A year after construction work started, it was recorded that:

"... the attap barracks at Tanglin were so far advanced as to be capable of affording ample accommodation for a European regiment ...".

But at a cost of ₤30,000, as declared in Singapore's official returns of 1860-61, the Barracks were met with some degree of doubt by the locals. With the Calcutta government's persistent inertia over the matter, no firm commitment to station European troops in Singapore had yet been made. A local petition challenged the wisdom of the "large and costly barrack accommodation" while the local press voiced their uncertainty by adding that:

"...they [the Barracks] will likely remain empty and deteriorate rapidly in consequence...".

This proved to be the case.

The gradual decay of the buildings in particular the attap roofs, prompted a report in the Singapore Free Press, suggesting that:

"... some twenty thousand pounds will still require to be spent [to renovate the Barracks]..."(15 October,1863).

In fact, Tanglin Barracks laid unused except for the odd festive occasions like the "horticultural fete and Fancy Fair" held to raise funds for the Botanical Gardens in 1864 and 1866. And only with Singapore's break from India in 1867, and the subsequent transfer of the Straits Settlements to the Colonial Office in London, was the Barracks saved from an early ignominious demise.

Plans to station a European regiment in Singapore were developed, the accommodation of the troops at Tanglin Barracks being central to their deployment on the island. Renovation works were carried out, including the re-attaping of the roofs, and in anticipation of future needs, a hospital was built and declared fully operational by the end of the year.

The Barracks were occupied the following year with the first full-strength infantry requirement being the 80th Foot Staffordshire Volunteers.

By 1870, Tanglin Barracks was well-established as a self-contained encampment. Officers' bungalows and messing facilities occupied the end of the camp closest to Orchard Road while at the distant end of the camp were sited the housing facilities of the rest of the regiment. In between the two housing areas was the parade ground and the garrison church, while up on the hill behind these was the camp's hospital. It is possible that this was the location at which the senior army medical officer in 1872 appraised Singapore town as "... a nursery for disease ...", alluding to the diseases endemic at the time, such as malaria, tuberculosis, dysentery, and enteric fevers. This preventive medicine message of the day referred to the lack of adequate water supply and sanitation in the town which affected, to a lesser degree, the Barracks.

Behind the hospital was a recessed area of land where an 800- yard shooting range was set up. In an effort to quell the level of drunkedness amongst his troops, the Commanding Officer of the regiment in 1869, Major C H Malan, had the jungle area in front of the soldiers' barracks cleared for the purposes of providing a cricket ground. The troops levelled the area, turfed it with grass, and set up the cricket pitch and practice facilities. The higher ground surrounding the cricket pitch and immediately in front of the soldiers' barracks were perfect positions to observe the match in progress.

In the search for precise details of the layout of Tanglin Barracks, we are indebted to the camp engineer, who in 1893, submitted a proposal for a new scheme to supply water to camp facilities. Accompanying his proposal was an excellent plan of the camp which, preserved by the National Archives, is the best available reference to the original Barracks that exists in public domain today. At the same time, the Barracks was home to 26 officers and 661 men of the sole infantry battalion officially recorded in Singapore. They complemented two artillery batteries, one company of Royal Engineers, and a few Sikh soldiers drawn from the China Gun Lascars.

By the turn of the century, the Barracks commanded sufficient stature to warrant detailed mention in G M Reith's 1902 Handbook of Singapore. Readers of this revised edition of the 1892 Handbook discovered that:

"The Infantry Barracks in the Tanglin district are about three miles to the north-west of the town, and stand on an elevation between Mount Echo and the Botanical Gardens. The situation is airy and healthy; the ground enclosed is nearly one square mile in extent, and within the enclosure are the Officers' Bungalows and Men's Quarters, Shops, Magazine, the Parade ground, rifle range (800 yards), and a large amount of open space for recreation and exercise."

The *Handbook* goes on to list the Barracks under "The Social Life of Singapore ...", "... the Garrison Golf Club (Tanglin Barracks)...", which we can presume to be a development of the sloping ground in front of the Officers' Mess Those who might be interested in playing a round here were advised that the jinrikisha* fares were to be found under the "Table of Distances (in miles)" which were:

From Raffles Place to ...

Botanical Gardens	3 1/2
Barracks, Officers' Mess	3 1/4
Barracks, Canteen	4

The First Class *jinrikisha* fair was 35 cents at the time.

It was in these surroundings that the famous English poet, Rudyard Kipling, stayed during his tour of India, China, and Japan in 1898. It is believed that he wrote two poems while staying at the Barracks and that these subsequently became known as the "Barrack Room Ballads".

If he had returned a decade later, Kipling would have felt very much at home in the Barracks as little had changed since the late 1800s. The attap roofs were replaced with hardier tiles, and the original garrison church was re-built in a new site closer to the Officers' Mess in 1910 under the direction of Captain William Stanbury of the Royal Engineers. But little else changed for another 20 years when a new generation of British military presence was felt in the Far East.

With the official approval of plans to fortify Singapore anew, the Barracks at Tanglin was the scene of much new construction. Some of the original buildings, the Officers' Mess being one, were torn down and new concrete structures erected on the old sites. To the credit of the architects of that busy period in 1934-6, attempts were made to design buildings which on the one hand provided maximum utility for the needs of the day, while blending in with existing ones on the other. Thus, gone were the airy verandahs to create more interior space, but well-preserved were the square support columns (albeit lacking the slimness and decorative fluting of the original columns) and the French-tiled roofs.

While these buildings have a history all of their own, suffice to say that the tale of the original Tanglin Barracks has now been told.

Its history has been recorded, history which in this case has found itself repeated as the modern Ministry of Defence in Singapore prepares to move from its home of the past 20 years. Buildings raised for purposes dictated by the 19th century needs of the island's defence forces find similar use today.

The generous buildings that once housed the soldiers of the first infantry regiments and through whose airy interiors passed generations of military men now find parallels in the defence departments that process and plan the soldiers of today's military: The Medical Classification Centre, Officers' Personnel Centre, Naval Training Department, SAF Careers Centre, even the Quartermasters' Store; through their compact offices and on their historical premises does walk the Singapore Armed Forces of today.

And while the Ministerial block bears little resemblance in appearance or function to the Officers' Mess of old, the original kitchen location and one dining area still survives. And in the front of the imposing building overlooking the golf course, beneath the protective gaze of the two artillery guns retired to their decorative role, are to be found four small headstones. These mark the graves of the four Regimental mascot dogs of the resident Infantry units during the 19 th century.

The Stables which once housed the other four-legged members of the regiment now provide a resting space for the four-wheeled transport of the present, at the car park outside MINDEF's rear gate. And the soldierly physical endeavours in the original camp Gymnasium are now the site of equally energetic pursuits in the SAF Child Development Centre.

Where the Regiment's Commanding Officer once pondered the affairs of his men, today's Personnel Affairs Department finds sanctuary. And not too far from this, the National Archives could not have chosen a more apt building for one of its Record Centres than the Tanglin Barracks Store.

The most graphic example of history repeating itself is, however, reserved for the Medical Services.

For where at one time in history soldiers were examined, diagnosed, and given medical treatment in the Tanglin Barracks hospital, the Physical Performance Centre today manages the injuries of the SAF's troops in training. And where once the hospital's medical orderlies tended to the running of hospital wards, an administrative branch oversees the smooth regulation of the present-day Medical Services Headquarters

And where once food was prepared in the Hospital Kitchen, food for thought is now served in the Medical Services Library.

Even the original "Dead House", where the bodies of deceased soldiers were kept prior to despatch and burial, finds a medical use today. But I doubt if the SAF's Psychiatric Branch would want its patients to be made aware of this little-known historical fact!

And so you see, I do know where the voices came from. I hope that this account will put them to rest, at peace with the recognition accorded them, and stilled by the new generation of voices who have heard their haunting story.

Lest we forget...

Editor's note: This essay was written in 1988 before MINDEF's move to Gombak Complex, and should be read with this consideration of time in mind.

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Towards A More Productive SAF: A Behavioural Approach

by CPT Tan Wee Ngee

Of late, the emphasis on Human Resource Management (HRM) has never been more explicit. The call for a more dignified and holistic management approach in the SAF is however plagued with problems on two fronts. First, just as management theories are complex and in themselves somewhat discordant, they are often too abstract and ambiguous in terms of applicability. Second, when we try to understand their relation to the uniqueness of a military organisation, the issue becomes even more profound. These apparent inadequacies point to the futility of "importing" management concepts and techniques hook, line and sinker and necessitate caution and latitude in using them.

While the relevance of certain concepts and techniques stir up many issues, their adaptation to suit our specific needs raises no less questions. Recognising the wide purview of topics and issues that might provoke further controversy and debate, I shall limit my discussion to a general treatment of productivity in the broader context of SAF's approach towards HRM.

The staggering cost-savings of $2.3 million derived from the SAF Suggestions Scheme (SAFSS) and the number of WITS teams topping a figure of 1,857 in FY 87-88 1 was a definite milestone in the SAF's history and probably an unprecedented record in its management and productivity feat. Yet, as our respect for numbers grows, our regard for human judgement and the intangible, qualitative concerns cannot be accorded a second place. We need to examine the components and processes underlying these figures as well. Probing questions that may elude the sometimes overly ambitious implementors need to be addressed: Do management and productivity concepts, borne out of the profiteering nature of business units, run against the very grain of the military organisation? How do we define productivity in the military context? What are the problems encountered in its measurement and improvement? What are the implications? On a micro-level, is the individual adequately compensated for his efforts in such programmes?

Adoption of POM Philosophy

Despite some misconceptions and even misgivings, the People-Oriented Management (POM) philosophy was formally introduced in March 1982. The impetus of this new approach hinges on the apparent incongruency between strict regimentation and the general trend towards individualism, manifested in the drive for personal identity and recognition. Gone are the days of peonage and servitude when orders must be obeyed, and authority respected without questions asked. Beyond the motive of survival, strong as it is, the individual is no longer easily conditioned into a set of norms or values in this modern era, with all its affluence and educational opportunities. He learns to evolve an identity of his own and probably puts more confidence and security in self than in the institution. In the process, being told what to do with an expectation of immediate, complete and unquestioning compliance becomes rather unthinkable for the educated youths who have been taught to reason and deliberate objectively. In fact, rather than ignoring or suppressing this trend which can only lead to dire psychological consequences, especially when recruitment is based on conscription, the SAF can instead take advantage of it by harnessing contributions, innovations and ideas from individuals. To facilitate this process, a more 'open' approach is deemed necessary.

One should be cautious, however, in the use of certain management terms to describe this more 'open' approach, lest it conjures a false impression. It is not totally 'informal' because it does not seek to eradicate or even mitigate regulatory or disciplined behaviour, although more upward communication is encouraged. "Breaking the rank barrier",2 in the literal sense of the phrase, would mean breaking the entire backbone of the organisation. The SAF is not adopting a 'participative' management style in the actual sense of the word because it is still the leaders or commanders who make all decisions, although a more 'open' style would rally greater inputs into and support for these decisions. Delegation of power downwards, let alone power equalisation, is obviously detrimental to the decisiveness of command and control in the SAF.

A more 'open' approach, therefore, endeavours to create "a work environment conducive to free interaction amongst and between officers, NCOs and soldiers".3 It recognises that change is inevitable and that the individual cannot be reduced to a mere 'number'. It capitalises on the belief that every new breed could be a more potent, productive human resource ever available to the SAF, without destroying the imperatives of the military structure or hierarchy. In principle, this is intuitively appealing to both the commanders and followers, but there is more than meets the eye: its integration into the SAF poses problems both at the conceptual (or image) and the practical levels. Conceptually, to the laymen at least, an 'open' style of management symbolises liberalism, and liberalism and discipline cannot mix. In practice, the stringent and rigid demands of routine training and operations leave little room, if any at all, for this approach to effectuate.

These are not easy problems to solve; attempted solutions in the form of training programmes are by no means complete and ultimate. From the outset, it must be emphasised that top management's earnest acceptance of this approach (at least in principle) is imperative before the desired goal can be realised. While the air of conceptual discrepancies can be cleared by purposeful publicity and education of POM, a deliberate effort on the part of the leaders and commanders is much needed to facilitate a two-way communication. Only then can we create a system of values based on mutual respect, to forge a sense of unity out of diversity, to create a loyalty out of selfish apathy and to create cooperation and a sense of purpose out of an otherwise internally-directed individualism. Unless such motivation exists within the organisation, the continued trumpet-blowing about the POM philosophy will be synonymous to flogging a dead horse. The crux of the issue is not really in striking a balance between discipline and participation (or more aptly, consultation), but in integrating the two. This calls for leaders to be more sensitive, approachable and less dogmatic in their own ways while still assuming overall command and control. We must see this as a process of evolution: attitudes do not change overnight. In this age marked by a high literacy rate and ruled by a strong sense of logic, reason and objectivity, the boredom of mere conformity and impetuous rituals may just turn the young off and cause them to challenge management. The most effective response - and one with the greatest potential - lies in challenging them further.

The Productivity Movement in the SAF

Having understood the rationale of the POM philosophy and the practical difficulties, let's move on to discuss a closely-related topic - productivity. It has been said that the great productivity search is on,4 evident by the scores of literature and research. In the SAF, productivity is no less significant, particularly when human resources have long been regarded our most important asset. But while productivity can easily be perceived in private organisations where the impact on the bottomline is measurable, it is not so in the public sector. Besides, financial incentives in the SAF are given as tokens, unlike private organisations where tangibles like profit-sharing and bonuses make the employees' effort more robust and forthcoming.

How then can we understand the productivity concept in the SAF, its measurement and improvement? The crude definition of productivity in terms of the relationship between total output and total input, or output per man-hour, is less than adequate as we cannot easily quantify the inputs and the outputs. Even if we can, the service and operational considerations dictate otherwise. In the final analysis, the SAF will be judged by its ability to deter threats of aggression and/ or by its effectiveness in battle. But in the process of shaping up, however, the SAF has to manage its routine administration, training and operations. To a large extent, a productive SAF during peacetime, both in quantitative and qualitative terms, would enhance its effectiveness in war. Quantitatively, productivity is reflected in cost-savings, man-hour reduction per task; and seen in the number of imp/rovement projects completed and suggestions received. Qualitatively, better techniques and equipment, a working environment which encourages constructive changes, and rewards for improved performance and innovations, are positive indicators of our productivity level. Thus, as defined by the National Productivity Board of Singapore (NPB): "Productivity is an attitude The SAF will be judged by its ability to deter aggression and its effectiveness in battle of mind that strives for and achieves the habit for improvements, as well as the system and set of practices that translate attitude into action."5 In other words, it is two-pronged: attitude and method.

Improving productivity does not usually require high-sounding technologies, massive computers, or a study trip to Japan. It begins with an attitude towards effectiveness and not solely efficiency; an attitude which

accepts personal responsibility for quality and pride in one's own work. But beyond that, productivity in the SAF has to be a deliberate effort on the part of every individual, directed by, but not confined to, such programmes as WITS, SAFSS and zero-defect movements. This is more so when one could so easily be entrenched in the complacency of job security (for the regulars) and the not-so-well- defined performance requirements.

Learning from the Japanese

The Japanese are renowned for their successful and innovative productivity concepts and programmes. This achievement is deeply rooted in their culture: the Japanese are holistic people, seeing a natural harmony in all of life's dimensions, a perception which helps integrate social and economic needs. Tending to view themselves as a national family, bound by duty and loyalty to one another, the importance of the individual is naturally submerged and a strong cooperative instinct emerges. Their on-going search for productivity is seen not as a separate activity but as an extension of this value spectrum.

One can easily conclude that such a system does not work in Singapore, let alone the SAF. Well, one can argue that it is not impossible to manage our organisation in a way that captures the essence rather than the form. In fact, there is really nothing grand or magical about the Japanese productivity programmes (e.g., QCCs, Suggestion Boxes, etc.) as they have long been attempted in the West, albeit differently. However, the Japanese seem to have acquired and mastered the art of putting all the ingredients together into a workable productivity system. The ingredients, by themselves, are of little value. But as a Harvard professor put it, "Productivity is like a jigsaw puzzle - all the pieces must be fitted together before the entire picture can be seen."6 We need to master this art as well. The answer to improving productivity in the long-term lies not in how well we can imitate the Japanese but how to take the best from them and stamp it "Made in Singapore".

Given the bureaucratic nature of the SAF, as is characteristic of most large organisations, this is a difficult challenge but a thoroughly rewarding one. It requires not just the infrastructure based on the POM philosophy, but also the dedication of every single member. Despite the various means used to promote productivity, it is often easy to stray off the track and become victims of the very system we have created. Productivity techniques, figures and charts, models, etc., can become idealised as ends in themselves. In such myopic pursuits, we can actually become counter-productive. For example, an improvement team, in the virtual absence of real problems or areas seeking improvement (those within their capacity to solve, at least), may frantically come up with some just to present the solutions for an impressive report or presentation. This concern to chalk up one achievement after another, with unworthy causes and at ill-commensurated expenses (time, effort and money) brings into focus questionable ideals and effectiveness of our productivity programmes, and underscores the need to continually return to the basics - What does productivity mean to the SAF? To the individual?

Implications of Productivity in the SAF

We may draw some implications in our discussion of productivity in the SAF. Firstly, the impetus for improved productivity must come from the top. As leaders and commanders, they should decide the focus for improvement efforts; consider their feasibility and advantages: and communicate them downwards. Given this scope and the right support, the individual teams or personnel can then identify the problems and objectives, outline the procedures involved, and set about the process of problem-solving. But while it calls for dedication to the essential details in planning and organisation, decision-makers should adopt a more humane and caring disposition in the implementation and control of productivity programmes. The formal process should not preclude individuals from making personal suggestions aimed at improving productivity, even if these are outside the prescribed areas. A systematic and carefully-monitored programme will provide direction, guidance and well-being to the otherwise meandering and diverse groups. The subsequent launch of the Unit SAFSS Management System (USMS) and the Unit WITs Management System (UWMS) has given unit commanders greater autonomy and flexibility in planning and orchestrating their respective productivity efforts. This pioneer management system had benefitted the SAF in terms of greater responsiveness and attentiveness to deserving areas within the organisation.

Secondly, the behavioural approach postulates that the development of a more participative organisation with favourable working conditions enhances the integration and hence productivity of the members. Essentially, the philosophy requires leaders and commanders to adopt a paternalistic type of management style by which they can relate with their staff on a day-to-day basis. Such an approach is characterised by the close, caring and nurturing type of relationship that an organisation builds up, as it tries to motivate, guide and develop its members. Only then can productivity be redefined as an organisational goal, reinforced by management and individual commitment.

But we should also guard against the erosion of discipline and the precedence of welfare above all other priorities. Structural stability with a distinct chain of command and a top-down decision-making process remains the essence of an effective fighting force. Humanising the military organisation should only strive to strengthen, not weaken it. Therefore, the onus is on the leaders and commanders to exercise superior judgement in drawing the fine line between humanisation and lapses in discipline.

In encouraging and facilitating productivity, leaders should not lose sight of why productivity is being pursued. In practice, their participation in the various training programmes, daily contacts with the facilitators and their visible support and guidance, to say the least, are definite morale-boosters.

Thirdly, the individuals themselves must be convinced of the need to be productive and should be duly rewarded for such attempts. Once again, as we refer to the Japanese productivity system, the reward that seems to work best is a pat on the back, although nominal cash rewards are offered in some cases. Positive reinforcements such as praise and recognition, betokened by trophies, medals, certificates and other commemorative items drive home the point that rewards do not necessarily have to take the form of a 'fat' cheque. This pre-supposes that while self-esteem is one of the greatest value of the new generation, some form of reinforcement and recognition by others should not be totally disregarded, man being a social animal. Therefore, in our system of rigid salary structures, classifications and grades, the intrinsic value of productivity needs to be accentuated. Incidentally, such reinforcements, as management consultants theorised, should bring forth a higher level of organisational commitment, involvement and sense of identity which pure financial incentives could not have otherwise achieved.

The use of cash rewards, as in the case of our SAFSS, is still a valid reinforcement practice despite the earlier argument. But monetary rewards should be kept to a nominal level; otherwise the intrinsic value associated with productivity efforts and self-improvement may be negated when they take the form of a "carrot". The SAF needs to give further thought on motivating and compensating its members such that they can streamline individual and organisational performance output, and to ensure sufficient motivation from the individuals.

Conclusion

We need to consider the far-reaching consequences of events, programmes, campaigns and policies that shape the periphery of our approach towards HRM. In the preceding discussion, I have raised more questions than I can attempt to answer, in the hope that the pertinent issues which surface can be resolved in the best interests of the individual and the SAF.

Managing our soldiers and establishing a proper frame of mind for productivity, therefore, remain a top priority in the SAF. While we may be disheartened that success cannot be imitated, we can take consolation that it is at least, contagious.

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The Unseen Enemy

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In 710 BC, Sennacherib, King of Assyria, led his powerful army against Jerusalem but was turned back by a strange, mysterious force. The Assyrians had earlier descended into the hot, humid valley of the River Jordan, and then climbed the mountain of Judea on the other side to beseige the city. But 2 Kings 19:35 records the following:

That night, the Angel the Lord went out and put to death a hundred and eighty-five thousand men in the Assyrian Camp. When the people got up the next morning - there were all the dead bodies! So Sennacherib, King of Assyria, broke camp and withdrew.1

A British officer in Palestine during World War I told of his experience which was not unlike what befell Sennacherib and his Assyrian Army:

After we captured Jerusalem in 1917, no one at GHQ knew anything much about the Jordan Valley or the land of Gilead on the other side, and nobody cared. But Lawrence's eloquence persuaded Allenby to launch an attack across the Jordan. The men went down the long, dusty, winding road to Jericho, seized the ford of the river, bridged it and advanced up into the mountains of Moab. The Turks attacked and were beaten off. They brought up overwhelming reinforcements and attacked again. Gradually they pushed us back into the deadly valley, where we held on grimly month after month.

And there an odd thing happened. Slowly our men began to feel tired and languid. As long as they remained in the sub-tropical valley they were not apparently ill, just listless and without energy. They didn't complain. But they had no life in them.

'The men are not ill. But they are not fit. It's the heat and the flies, and the dust and the grub,' said the Principal Medical Officer. 'Let's send them in detachments to the rest camp in Jerusalem.'

Some hundreds of them were piled into general service wagons and taken up the winding road back to Jerusalem, where they were dumped, complete with rifles and equipment, and marched to the rest camp.

They went to their tents. Nobody noticed anything. They lay down, and the next morning, half of them were found dead. It was a complete surprise, a mystery until we got the experts on Tropical Diseases onto the problem and they discovered the cause in the blood of the survivors. They had been smitten by malignant malaria, The Angel of the Lord.2

Seen in this light, Sun Tzu's injunction to military commanders, "Know the enemy and know yourself,"3 takes on fresh meaning. When armies go to war, they fight against not only the visible array of men and equipment, but also a host of invisible and deadly foes - bacterial, viral, parasitic, and environmental. In fact, throughout the history of armed conflict, more men have perished from sickness than by the sword. Disease and privation, more than battle injury, have profoundly influenced the outcome of military campaigns.

One of the best known examples is Napoleon's ill-fated invasion of Russia in 1812. "Generals, Winter, Famine, and Typhus,"4 rather than Russian bullets, decimated his Grande Armee of more than half a million men, forcing a humiliating retreat even though Moscow had been successfully taken. 60,000 were killed in action, but many more were claimed by disease - chiefly typhus, typhoid, dysentery and pneumonia, resulting from unsanitary conditions and the lack of proper food and shelter and exposure to the severe cold. The retreating army abandoned those unfit to travel and eventually, only a pitiful remnant of about 20,000 returned to France.5 According to Clausewitz, "lack of food, supplies and medicaments were the most important factors in the destruction of the Grand Army".6

Other examples abound in the annals of military history, of disease and privation exacting a higher toll than enemy action. Among the 19 th century wars are the following:

- In the 1802 suppression of a rebellion in Haiti, of a force of 25,000 French soldiers, 22,000 died from yellow fever. The event influenced Napoleon a year later to sell Louisiana, deemed equally inhospitable and difficult to defend, to the Americans.7
- In the Russo-Turkish War of 1828, 115,000 Russian soldiers invaded Turkey but within one month 6,000 had died of plague. All told, 100,000 died of disease - mainly plague, typhus, typhoid, dysentery, and cholera - compared to only 20,000 from battle wounds.8
- In the Crimean War of 1854-56, of the French and British allied armies of 200,000 men, 77,030 died of cholera, typhus, typhoid, dysentery, and scurvy, while 17,197 died of battle wounds.9
- In the Mexican War of 1846-47, out of 78,718 US soldiers who went into Mexico, 11,550 died of disease, mainly dysentery, while only 1,721 died of battle injury.10
- In the American Civil War of 1861-65, dysentery caused the majority of casualties among the Union Army of 2.2 million men, which lost 224,586 to disease and 110,070 to battle wounds.11
- In the Russo-Turkish War of 1877-78, the Army of the Danube (592,085 men) lost 50,464 to disease and 16,860 to battle wounds. The Army of the Caucasus (246,454) lost 34,877 to disease and 1869 to battle wounds. The chief causes were typhus, typhoid and dysentery.12
- In the Spanish-American War of 1898-99, of a mean average strength of 235,631 men, the Americans lost 3,450 to disease - mainly typhoid, yellow fever and malaria - and only 369 in battle.13
- In the Boer War of 1899-1901, the British Army of 448,435 men lost 13,000 to typhoid as against 8,000 battle deaths. Some 22,000 troops were treated for wounds but 20 times that for disease.14

Statistics complied for the two centuries preceding the Boer War show that on average, at least four soldiers perished from disease for every one killed by battle wounds.15 No wonder Zinsser, in his 1935 classic, Rats Lice and History, concluded:

Typhus with its brothers and sisters - plague, cholera, typhoid, and dysentery - has decided more campaigns than Caesar, Hannibal, Napoleon, and all the generals in history. The epidemics get the blame for defeat; the generals the credit for victory. It ought to be the other way round.16

That diseases have had such devastating effects on armies should not come as a surprise. From the earliest times, epidemics have killed millions - all part of the larger, inter-species struggle between man and microbes. Human wars and conquests, by disrupting the status quo, merely set the stage for unbridled exploitation by the plasmodia of malaria, the vibrio of cholera or the bacilli of dysentery and typhoid (boom time from their point of view!).

Up until the late 19 th century, with the triumphs of modern medicine still in the future, doctors were as helpless against the pestilence as their ancient counterparts during the Plague of Athens (430 BC) which wrought great havoc during the second year of the Peloponnesian War ...

Doctors were quite incapable of treating the disease because of their ignorance of the right methods. In fact mortality among the doctors was the highest of all,since they came more frequently in contact with the sick.17

...or their Medieval colleagues when the Black Death (1347) ravaged Europe 1,700 years later:

Doctors dared not visit the sick for fear of being infected. And when they did visit them, they did hardly anything for them, for all the sick died, except some few at the last who escaped.18

From the late 1800s onwards, however, a series of spectacular breakthroughs took place, dramatically altering the balance. One after another, the causative agents of infectious diseases were identified - amoebic dysentery in 1875; anthrax in 1877; gonorrhoea in 1879; typhoid and malaria in 1880; tuberculosis in 1882;

cholera in 1883; diphtheria, tetanus and pneumonia in 1884; epidemic meningitis in 1887; gas gangrene in 1892; plague in 1894; bacillary dysentery in 1898; and so on.19 Vaccines and antitoxins could at last be developed. Subsequent proof of the mosquito's role in the transmission of malaria (1897) and yellow fever (1901) and of the louse's role in spreading typhus (1909)20 facilitated efforts at vector control.

Still, the Unseen War was by no means won. Typhoid had been tamed by the turn of the century, so why its devastating resurgence in the Spanish-American and the Boer Wars? The answer is not ignorance but negligence of basic sanitary precautions: contamination of food by flies feasting on the faeces of patients and unhygienic food handling in the Spanish-American War;21 and in the Boer War, undisciplined drinking of unboiled water "wherever they found it, including water of the polluted Modder river".22

The turning point in war casualty statistics came with the Russo-Japanese War of 1904-05. At the close of the "first great war of modern times in which an army of the Orient defeated one from the Occident",23 Japanese casualty figures amazed the world: four times as many had died from bullets as from disease, prompting the London Standard to hail it "a record not paralleled in the annals of war".24

The Japanese feat was no fluke. Only 10 years earlier, fighting against China (1894-95), the Japanese had lost four times as many soldiers from disease as from bullets. Moreover, 45 percent of Japanese troops had been afflicted with beri-beri, a disease which could have been prevented by making changes in the combat rations. This situation deeply disturbed the Japanese Government - which at the same time realised that sooner or later a clash with Russia was inevitable - as the following remarkable piece of reasoning revealed:

We are about to engage in a terrible war with an antagonist of great strength and prestige, with enormous resources and supposedly invincible army. Our mortality in the conflict may reach a million men. If the average of the wars of the last 200 years are maintained, 200,000 men will fall on the firing line or from wounds and 800,000 will die in hospitals from disease. For every man who dies, there will be at least 10 who will be ill ... These men will require nursing and hospital care, necessitating enormous expense and impedimenta. We are willing to sacrifice the million men, but the element of the disease with its terrible cost and impedimenta must be eliminated.25

Japanese officers were sent all over the world to study the medical departments of the other armies. With the knowledge thus garnered, Japan evolved a system of her own... organised her medical department on broad, generous lines and gave its representatives the rank and power their greatest responsibilities merit, recognising that they had to deal with a foe that killed 80 percent of the total mortality... and put into execution the most elaborate and effective system of sanitation that has ever been practised in war.26

Garrison states that the Russo-Japanese War made it self-evident that "in a contest involving armies of millions, neglect of these (sanitary) principles would spell disaster worse than defeat".27 This assessment was borne out in World War I.

On the Western front, despite the unprecedented concentrations of millions of men in the trenches of northern France, typhus was contained through ritual delousing and immunisation.28 But on the Eastern front and beyond, where control measures were non-existent and fleeing masses of refugees created the conditions for spread, the most serious typhus epidemic in history broke out. Three million people in Russia (out of 25 million cases), 400,000 in Poland, and 300,000 in Serbia perished.29

Even as traditional threats like smallpox, typhoid, tetanus, and diphtheria were rendered relatively innocuous, 30 newer ones - scarlet fever, meningitis, measles and mumps - which to some extent were previously masked by the more rapidly spreading contagions, attained greater prominence.31 Influenza and pneumonia emerged as major killers.32 For every casualty inflicted by the visible enemy in World War I, the Unseen Enemy still claimed two.33

In World War II, battle deaths outnumbered disease deaths - no doubt due to the enhanced implements of war on the one hand, and improvements in disease prevention on the other. The medical record was impressive: in the US Army of over 3 million, there were less than 50 typhoid cases with two deaths, eight

typhus casualties without a single death, and one tetanus victim who succumbed. By diabolical fate, the Germans provided a "controlled experiment" as only the Luftwaffe and certain paratroop elements received tetanus toxoid, and hundreds of German prisoners of war developed tetanus and died in American hospitals.34

Despite significant reductions in mortality in the "modern wars", vast numbers continued to be incapacitated by disease, which accounted for 87 percent of all US Army hospital admissions in World War II, 67 percent in Korea and 69 percent in Vietnam.35 It must be remembered that from the military point of view, *morbidity*, and not mortality, determines effective fighting strength.

Whilst Captains and Kings of antiquity might be forgiven for being largely defenseless against the Unseen Enemy, modern-day commanders have no excuse for losing fit, young soldiers to preventable disease. Two of World War II's most illustrious generals - Slim and Rommel - provide an interesting study in contrasts, emphasising the importance of command responsibility for the health of troops.36

The British 14th Army, in the India-Burma theatre in 1943, had reached a low point after their humiliating retreat from the Arakan. In Slim's own words:

For every man evacuated with wounds, we had 120 evacuated sick. The annual malaria rate alone was 84 percent per annum of the total strength of the army and still higher among the forward troops... A simple calculation showed me that in a matter of months at this rate my army would have melted away. Indeed it was doing so under my eyes.37

Anti-malarial prophylaxis would have provided adequate protection - had it been faithfully pursued. A lesser commander might have breathed down hard on his medical officer, but General Slim recognised it as not a medical, but a command problem:

Good doctors are no use without good discipline. More than half the battle against disease is fought not by the doctors, but by regimental officers. It is they who see that the daily dose of mepacrineis is taken... I, therefore, had surprise checks of whole units, with every man being examined. If the overall result was less than 95 percent positive, I sacked the commanding officer. I only had to sack three; by then, the rest had got my meaning.38

Soon after, the number of new malaria cases declined dramatically. And so it was, that the enlightened general went on to take his place in history as the inspiring military leader "who, more than any other soldier in the theatre, was to imprint his will on the course of the war."39

Rommel, on the other hand, and for all his military genius, paid scant attention to the health of his*Afrika Korps*. In the months before his decisive defeat in the second battle of Alamein in 1942, for every German absent from duty because of battle injury, three were lost because of disease - mainly dysentery, hepatitis, malaria, and skin disease. Of the 40,867 German troops medically evacuated from North Africa in 1942, 28,488 were for disease. Elite units such as the 15th *Panzer* Division were functioning at one-third strength.40

Rommel mentioned in his dairy in August 1941 that there was "a lot of sickness" and in September that he was "continually hearing of the growing sick parades caused by bad rations."41 But he apparently did little to improve the situation, judging from a British report entitled Hygiene Aspects of the El Alamein Victory:

Enemy defensive localities are obvious from the amount of faeces lying on the surface of the ground... This contempt for hygiene became such a menace to the enemy as to affect from 40 to 50 percent of his front-line troops, as interrogation of captured medical officers revealed... The enemy appears to have no conception of the most elementary measures, and has a dysentery/diarrhea rate so very much higher than ours that it is believed that the poor physical condition of these troops played a great part in the recent victory El Alamein.42

In fact, the most important casualty was Rommel himself, who came down with infective hepatitis. The timing could not have been worse. In Liddell Hart's opinion, Rommel's absence and the inexperience of desert conditions of his temporary replacement from the Russian Font "was an additional handicap in the planning and preparation of the measures to meet the impending British offensive".43 According to Barnett, "perhaps the greatest of the Axis weaknesses was the absence of Rommel, lying sick in a hospital bed in Semmering" when the offensive did come.44 But the most direct comment came from Sir Sheldon Dudley:

Montgomery says the Eighth Army won, but Rommel claimed the victory for dysentery... as the Germans learned at El Alamein, dysentery can still win battles when hygiene discipline on one side is slack.45

Those who fail to learn from history, Santayana warns us, are condemned to repeat it.46 Yet all too often, the lessons of military medical history have been expensively learnt, forgotten, and re-learned. For example, many of the well-documented problems relating to skin diseases in jungle operations experienced by the US Army in World War II,47 the French in Indo-China (1945-1954)48 and the British in Malaya (1940-1959)49 re-appeared in Vietnam. Appropriate preventive actions were not taken until after the situation had reached epidemic proportions.50 Skin diseases turned out to be the leading cause of temporary disability in Vietnam during the entire war (1,412,500) outpatient visits)51 and the third leading cause of hospitalisation for disease (45,815 admissions), ranking behind diarrheal diseases and respiratory infections, and ahead of malaria.52

The contributions of military psychiatry in World War I were also lately forgotten and disregarded at the start of World War II. More than two years elapsed before previously established concepts and practices - that "locally based treatment with a brief respite from combat stress furnished prompt relief for fatigue and other physiological defects" - were re-learned and re-established.53 World War II experiences demonstrated once more the importance of treating psychiatric casualties within the battle zone and providing an atmosphere of expectancy for recovery and return to combat duty; yet, in the 1973 Yom Kippur War, with the ratio of combat stress reaction cases to wounded casualties at 30:100, 54 the efficient Israeli medical evacuation system functioned as a conduit for bleeding fighting strength - only 2 percent of those evacuated were returned to duty. Learning from this experience, the IDF in the Lebanon War of 1982 implemented forward management of combat stress casualties, as a result of which 80 percent of combat stress casualties were returned to duty.55

Although the discussion has so far centered on disease, it is clear that the Unseen Enemy has many faces. As already mentioned, the situational stress of the battlefield itself can be a formidable foe - "There are casualties in war who are neither killed nor wounded; a shell kills four men and intimidates a thousand."56

The Unseen Enemy could also be the wintry cold...

- In 218 BC, Hannibal started with an army of 46,000 to cross the Pyrenees and Alps into Northern Italy and lost approximately 20,000 men to the cold in a space of 15 days;57 during World War I, the British suffered 115,000 cold casualties, the French suffered 80,000, and the Italians 38,000; in World War II, the Germans suffered 100,000 cold injuries requiring 15,000 amputations in November and December of 1942;58 fully 10 percent of the US fatalities in Korea were cold-related.59

    Or the scorching heat...

- In the Six-Day War of 1967, 20,000 of the Egyptians deployed in depth across the peninsular died from heatstroke, even though the war lasted only six days. The Israelis, having learnt from previous experience, encouraged every precaution (including holding the commander responsible for heat casualties) and did not lose a single man to the heat.60.Or the dizzy heights...
- Indian and Pakistani troops stalemated over a disputed Himalayan boundary at 20,000 feet above the sea level, are breathing air that contains less than half the oxygen at sea level, at temperatures that drop below -43°F. Both sides admit that eight out of 10 casualties are caused by these conditions ... We both face the same enemies: the weather and the altitude.61

The Unseen Enemy moves with the times as well. When aerial combat revolutionised modern warfare, a new dimension to the medical threat was added. Only 2 percent of British pilot losses in World War I prior to 1917 were due to enemy action; 3 percent died because of mechanical failure of aircraft while 90 percent were the result of deficiencies in the pilot.62 The solutions to many of these problems have since been found, but the point is, technological advances in weapons systems (e.g. high-G combat aircraft) and new combat environments (e.g. chemical warfare) which push Man to the limits of human tolerance, continue to pose new threats. So also do advances in recombinant DNA technology and bio-engineering, enabling large-scale manufacture of biological agents or their toxins and making "synthetic" epidemics a real possibility. And of course, many of the ancient scourges are merely under control, not eradicated; given half the chance, they will return!

What General MacArthur wrote in 1935 concerning military history is equally applicable to the lessons of military medical history:

The military student does not seek to learn from history the minutiae of method and technique... But research does bring to light those fundamental principles which, in the past, have been productive of success. The principles know no limitation of time...63

The underlying theme of this essay is that the Unseen Enemy - broadly defined as those factors present in the battlefield which are detrimental to human health and performance, be it biological, physical, physiological, or psychological - must be identified, studied and neutralised, if the price of war is to be lessened. Whether from the military or humanitarian standpoint, no military commander can afford to ignore the Unseen Enemy.

Firstly, under-estimating the unseen threat can be as costly as misjudging enemy firepower. Preventable casualties in particular are potent force dividers - affecting not only fighting strength but also morale. If one side does all it can to protect its men from the same medical, environmental and psychological threats while the other does not, then this one side holds the edge (and indeed, turns the unseen foe into an unseen friend). As the title of Slim's memoirs*Defeat into Victory* suggests, attention or inattention to the Unseen Enemy can mean the difference between victory and defeat.

Secondly, the commander who endangers the lives of his men through disregard for the human aspects of military operations is not only militarily but *morally* irresponsible. As Benjamin Rush argued cogently in 1777, "If it be criminal for an officer to sacrifice the lives of thousands by his temerity in a battle, why should it be thought less so to sacrifice twice their number in a hospital by his negligence?64 Soldiers may be prepared to lay down their lives for their country, but there is no justification for allowing them to suffer or die *needlessly!*

History should make us wise, not only to the past but also the future. As long as preparing for war remains a paradoxical necessity for ensuring peace, is there any question that the Unseen Enemy must be taken into account when planning for the next battle? Or that adequate *medical*intelligence and *medical* threat assessment, and appropriate countermeasures should be in peace?

War is not a game but a matter of survival. There is nothing so costly, therefore, as an army that is insufficient for its task. As Sennacherib, Napoleon and others have found, the army that ignores the Unseen Enemy in its planning and preparations is insufficient and may be courting defeat of an inglorious kind.

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War and the Use of Force in the Contemporary World

by CPT Goh Teck Seng

Is there a place for war and the use of force in the contemporary world? It may at first seem futile to ask such a question since war, not peace, has been the norm of our existence just as disorder, not order, is the natural scheme of things; and there is no compelling reason why the future should be any different. After all, sovereign states, out of desperation have never hesitated to resort to force to settle their claims. Yet the question is not an idle one to ask. Among others, it helps to re-focus attention on the fundamental issue of war and peace at a time when peace is being sought the world over, or at least so it seemed until Iraq's callous and unprovoked invasion of Kuwait on 2 Aug 1990. The pursuit of peace, even if the process is somewhat interrupted, has progressed under a growing global consciousness that confrontation and antagonism does not pay.

The easing of tensions between the superpowers has largely contributed to this general observation. The Cold War, for decades a destabilising factor in world politics, and once best expressed in the imagery of awesome NATO and Warsaw Pact forces opposing each other in Central Europe, is fading away; and with it, the global ideological contest between democracy and the free-market economy on the one hand, and Marxism-Leninism and the controlled economy on the other, is fast fizzling out - at least for now. In other words, the old world order of contending East-West blocs which came into being after World War II is crumbling. A new world order is evolving, gradually but inexorably, although its course remains largely unsettled and its eventual shape as yet indeterminate. Peace and co-operation, not confrontation and antagonism, are the defining features of the emerging world order. War and the use of force, under the circumstances, would seem no longer relevant as an option for sovereign states to assert their self-interests. How valid is this argument?

In dealing with this question and other related issues, I shall first discuss war and the use of force from a broad historical perspective. The second part of the article will examine the relevance of war as a policy instrument, at a time when global changes are ushering a new world peace.

What is war? War inevitably implies the use of force or an act of violence; the two are not mutually exclusive. Yet violence is not war unless it is carried out in the name of a political entity and is further directed against another similar political entity . 1 In the most general contemporary sense, war is "any organised violence between distinct but similar political entities".2 Within the context of the international system, these "distinct but similar political entities" are the sovereign states. The system of sovereign states, as the world is presently constituted, is both a strength and a weakness: a strength because the system, in the first instance, upholds the sovereign rights of states; and a weakness because by permitting the assertion of these very rights, the system itself leaves the option of war very much at the discretion or, more precisely, indiscretion of sovereign states - a point to which I shall return to later.

War and Civilisation

Now for a historical insight into war. The issue of war and the use of force which war invariably involves, is as old as civilisation itself. Indeed, civilisation, as we know it, would not have achieved such monumental progress if not for the very powerful stimulus provided, in part, by war and by man's relentless search for ever more lasting ways of preserving peace. And the stronger the stimulus, the stronger has been the response. For to fight and win and to maintain peace, a society must plan more rigorously, organise more tightly and apply its knowledge of science to maximum effect - all this just to confer upon itself a definite military advantage in the battlefield. And this advantage is needed not so much to win battles swiftly and decisively, although this is important, as to underpin a strategy of robust deterrence to strengthen the peace thus attained.

To return to the point about war and civilisation, as Walter Bagehot put it, "Civilisation begins, because the beginning of civilisation is a military advantage"3 and the "the compact tribes win."4

The argument is plausible enough. Yet, paradoxically, while war does have a "civilising" function, albeit in a subliminal sense, it poses a grave threat to a society's existence, and in the nuclear context, to the very survival of civilisation itself. War, which had driven Renaissance Europe to unprecedented heights of technological innovation, has also been a major cause of the demise of many once great and glorious civilisations.

War therefore plays a crucial role in the unmaking of civilisations; indeed, if one may be so bold as to assert, in also charting the course of human history and in determining the shape of the contemporary world. The rise of the US and the Soviet Union as superpowers would not have been possible but for World War II which, in its aftermath, shifted the world political centre of gravity away from an impoverished and exhausted Europe. Europe no longer held sway after 1945, and with it, the death knell sounded on a Euro-centric world in which, for decades, "the political map of Asia and Africa was drawn largely by statesmen in London, Paris and Berlin"6 . Similarly, decolonisation in Asia would not have assumed such pressing urgency but for the fact that the myth of British invincibility was so utterly shattered by Japan's conquest of Britain's Far East Empire - an empire, Churchill once touted, "on which... the sun would never set...". Such was the might and glory of the British Empire; but the might and glory, as it turned out, was matched only by the disconcerting speed at which the empire fragmented under the crushing weight of Afro-Asian nationalism and eventually withered away. War had triumphed in undoing what it would have been impossible to unravel by any other means - in this particular instance, the British Empire, since given the military preponderance then of the British colonial overlords, any uprising by the subject population to end British rule would undoubtedly have stood little chance of success.

War and Nationhood

War does not only destroy; it also creates. The state of Israel was born in war. So were the established democracies of the West and the ancient Eastern civilisation of China. True nationhood cannot be properly forged without the baptism of war. For, as Rupert Emerson, in his literary masterpiece, *From Empire to Nation*, has aptly noted, "a nation is a community of people who feel that they belong together in the double sense that they share a common heritage and that they have a common destiny for the future".7 That shared sense of a common heritage and destiny cannot come about unless the community of people constituting the nation are themselves unified by a common experience of having overcome crises together and by a shared memory of victorious wars fought. The military triumphs, for instance, at Austerlitz and Trafalgar will always be a part of the common heritage, respectively, of France and Britain 8 , and the mere fact of this has facilitated national self-identification. Michael Howard, the noted military historian, has posed a searching question, "Could a nation, in any true sense of the word, really be born without war?"9 In other words, can a community of people really melt into a nation other than in "white heat"? On this issue, historical precedents are not particular reassuring.

War, then, is an agent of change, for better or for worse. It overturns the *status quo* and replaces it with a new order. While war must mean mayhem and untold suffering, it does not follow that war is an absolutely irrational activity, embarked upon for frivolous reasons. War is certainly not, as some critics have alleged, organised insanity, although the massive destruction and casualties war exacts does sometimes defy attempts at rationalising the objectives that war can profitably achieve.

War - A Rational Act

Generally speaking, war is almost always a deliberate and carefully calculated act, however inchoate and reprehensible the motives for initiating it may be and whatever the criticisms. For no sane man fights for the sake of fighting. In fact, war, according to Karl Von Clausewitz in Vom Kriege (On War), is "simply a continuation of policy with other means"10 or more explicitly, "simply the continuation of policy with the admixture of other means".11 In other words, war in the Clausewitzian conception is but a means to achieve

a political end. Implicit in this notion, clearly, is the idea that for as long as war is subordinate to national policy, which is invariably tied to the national interest, war is a rational act.

War as a Policy Instrument

That war is a rational act has been borne out sufficiently by history. Whether we look to Bismarck's wars to unify Germany and impose hegemony on Europe, to Shih Huang Ti's wars to unify China and establish himself as the First Emperor, to the wars by the Allies to defeat the Axis powers or to Britain's 1982 war to reclaim the Falklands, there is no dearth of examples showing that wars are embarked upon to attain specific policy ends. Nevertheless, there have also been instances of wars which have been blundered into.

World War I is a classic example. Following the assassination of Archduke Ferdinand and his wife in Sarajevo in 1914, 12 tensions mounted, war broke out and then in an escalatory spiral, one act of aggression fed another, until the warring parties were exhausted, the victor no less than the vanquished. World War I was thus a ghastly mistake, fought without any clear war aims. But to be sure, each war has elements of the rational and the irrational, and it would be too sweeping to view war as a wholly rational activity although, on balance, this seems to be the case.

But is war still relevant as a policy instrument in the contemporary world? The issue of the continued relevance of war as a policy instrument must be examined against the question of whether war still constitutes a rational act under prevailing circumstances. But the question of the rationality of war cannot be satisfactorily answered without reference, in the first instance, to more stringent criteria of what constitutes a rational act. It calls for an elaboration of the Clausewitzian idea of rationality previously discussed, and this is necessary if we are to argue the case more vigorously.

To qualify as a rational act, war must:

- Be consistent with the political objective for which it is started;
- Be cost-effective, in the sense that the cost of war must be minimal vis-�-vis other options;
- Settle the political problem, if not wholly, then at least satisfactorily.

Has war ceased to be a relevant policy option in the contemporary world when considered against the rationality criteria outlined? Proponents would stress the futility of war as an option in modern times, since in the nuclear age, given the stupendous advances in weapons delivery technology and the awesome destructive power of nuclear weapons, any war must destroy both the aggressor and the adversary, and indeed all civilisation.13

This view contends that total war leading to total annihilation is horrendously senseless; that no conceivable political objectives, save extreme cases of national survival, can now be profitably achieved by war.

Indeed, almost 80 years old, a Polish military philosopher named Bloch has written a six-volume treatise on war, arguing against its use as a policy instrument precisely because of the ever-increasing destructive power of modern weaponry.14

While it is true that wars fought without restraint or limitation by nations possessing nuclear weapons cannot serve as a policy instrument, it does not follow that war is no longer a rational and hence relevant policy option in the contemporary world. Why?

To begin with, nuclear wars (not within the scope of this discussion) are absolutely irrational wars. Although strategies have been evolved to rationalise the waging of nuclear wars, such as massive retaliation, flexible response and MAD (Mutual Assured Destruction), these are really no more than attempts at rationalising the irrational. In any event, nuclear war is the preserve of only a handful of nuclear powers and does not concern the majority of sovereign states which is the subject of this article. We are therefore speaking here

only of conventional war whenever the term war is referred to. The question reformulated then, is whether war, in the conventional sense, still serves as a rational and thus relevant policy option today.

- ## **Limited Political Utility**

War is still very much a rational and a relevant policy option in the contemporary world. Witness the Korean War, the Indo-Pakistani Wars and the Arab-Israeli Wars in the post-war period: all had been fought with specific aims in mind; all had been deemed the most cost-effective way of resolving issues; and all had settled the political problem at hand, if not totally, then certainly satisfactorily. But war as an instrument of the state now has narrower applications compared to earlier times and will not be resorted to as lightly. The reasons for this are many but inter-related, and these reasons are the very factors limiting the political utility of war today.

First, technology has made the waging of war more efficient and hence more costly. From rudimentary forms of warfare in 2000 BC when war was waged with mere stones axes and flint blades, we are today into automated warfare which makes possible the detection, identification and destruction of enemy forces beyond visual range.15 No longer will navies sail the oceans in total ignorance of where their opponents might be, as in the past, or rival armies march and countermarch in the hope of blundering into the enemy, surprising and then routing him, or identification simply a question of inspired guesswork. Warfare today is devastating and deadly efficient, so much so that mutual ruin is almost invariably the result. This ultimately means the costs of war will, under most circumstances, outweigh any political objectives for which it may be fought, except perhaps the most bizarre. This fact had transformed states' perceptions of the cost-and-benefit calculus of war, and with it has come a growing reluctance to wage war as a first resort without well-considered and deep deliberations.

- ## **Economic Gains**

Second, the trend towards economic regionalism and globalism. The Singapore-Batam-Johore growth triangle, the impending 1992 European Common Market and efforts to strengthen GATT (General Agreement on Tariffs and Trade) are examples that spring immediately to mind. Indeed one of the political objectives for which war has traditionally been fought is economic. It is now widely doubted whether war can effectively promote economic gains. The economic success of modern-day Japan through peaceful co-operation has lent credence to this view although during World War II, she had attempted to achieve a similar economic objective through war. In other words, sovereign states can now fulfil their aspirations for a better life through peaceful means of economic co-operation rather than territorial conquest. And a global economic network with workable institutions (such as GATT, the World Bank and the International Monetary Fund) and procedures have sprung up to facilitate this. In any case, the world has become too economically interdependent and intertwined to wish to see wars wipe off the gains of international trade and commerce - gains which have given the world unprecedented levels of prosperity and wealth.

- ## **Triumph of Diplomacy**

Apart from the appalling cost of war and the growing benefits of economic co-operation, or more precisely because of them, sovereign states today exhibit an unusually high level of self-conscious co-operation, unseen perhaps since the Concert of Europe from 1815 -1854 16 . States now willingly co-operate in the expectation of reciprocity, and whenever differences arise, negotiations and self-restraint are preferred to blustering and confrontation as a method of resolution. For states now have a greater stake in preserving the status quo of peace and stability from which they have benefitted immensely in material terms. Indeed, the process of negotiations and self-restraint has been formalised and strengthened, as is happening, through the institution of diplomacy and such other mechanisms as confidence-building measures. By diminishing the risk of strategic misapprehension and hence strategic miscalculation, such developments have preserved the

conditions for peace and stability. The new chapter in history unfolding before our very eyes is therefore, in many ways, the age of the triumph of diplomacy.

Finally, the psychological dimension. The revulsion of war, especially since the ghastly experiences of World Wars I and II are still within living memory, has psychologically inhibited many statesmen from exercising too readily the war option although desperation may, at the end of the day, warrant it.

Consequently, a global consciousness is growing that humanity is better served by co-operation than confrontation. It is for this reason that Gorbachev launched his programme of perestroika (restructuring) at home and "new thinking" in his foreign policy. It is for this reason, too, that the world has acted decisively against Iraq's invasion of Kuwait. There is now, more than ever, a deeply shared sense of a common destiny among the sovereign states of the world, best demonstrated perhaps in the United Nations' (UN) concerted approach to the Gulf crisis.

- ## Collective Security

The Gulf crisis has, to a large extent, revitalised the UN as an institutional manager of conflicts. The UN, for so long an institution of pious hopes, has finally come into its own. The sweeping sanctions that the UN imposed on Iraq and its damning condemnations of the invasion have rekindled hopes that, at long last, collective security may be given a chance to work. Collective security, which has been enshrined in Article 1 of the UN Charter, commits the organisation to "take effective collective measures for the prevention and removal of threats to the peace, and of the suppression of acts of aggression or other breaches of the peace".17 But the record of the UN on collective security has been dismal due largely to the Cold War, at least until of late. For the Cold War had polarised the world into two competing blocs and to the extent that the competition was played out in the Security Council as expressed in the Soviets' use and the West's counter-use of the veto, it had weakened the UN collective security system, since a key premise for it to work was the unanimity of the five permanent members on the Council.

But the prospect for collective security has never looked brighter. Never before has the UN acted so decisively and concertedly to punish an act of aggression as in the case of Kuwait. If collective security works, then potential aggressors will, in future, be deterred sufficiently by the threat of a collective response to attempt aggression. This fact alone should further limit the utility of war as a policy option.

There is, however, a caveat: whether the threat of a collective response will deter aggression in future will hinge, ultimately, upon how the Gulf crisis is resolved. Will Saddam Hussein get away scot-free? Or will overwhelming force bring him to his senses, if not to his knees? The world is watching anxiously as the drama unfolds in the Gulf.

Cost-Benefit Analysis

But the spectre of war will always loom large. War, it must be acknowledged, is inherent in the very structure of the states system. States guard their sovereignty jealously, often asserting their independence fiercely and deciding almost always unilaterally how their interests may be fulfilled in ways they alone deem fit. In the event, sovereign states are free to choose war as a method of settling outstanding disputes, if war should be perceived to hold out better prospects of a settlement than diplomacy. So whether a state will seek redress through war to right what it considers a wrong will hinge on its calculation of the likely benefits and costs of war vis-�-vis other policy options. Because states exist in different geographical and political contexts, cost-benefit calculations differ in both the absolute and the relative senses: what could restrain one state may very well be the factor that spurs another to act. In the absence of a supra-national authority which can act as the final arbiter of disputes, the will of sovereign states on the choice of war as a policy option must prevail. And for as long as this is so, war remains a possibility that all governments must take into consideration.

Conclusion

War, then, has shaped and re-shaped the world into what it is today. War, to be relevant in the contemporary world, has to be an instrument of policy to be employed only if it meets the rationality criteria spelt out. Once so useful, war as a policy option is now, because of its great destructiveness and the changing international climate, apparently less useful. The flip side is that war has become, if anything, a more rational policy instrument since now, more than ever, the decision on whether to wage war will have to be weighed more stringently against the rationality criteria. But war is so much a consequence of the states system and human instincts that it does not seem likely to disappear, at least not until something wonderfully dramatic happens to mankind. Until then, war and the use of force will, when all else has failed, still decide whose will would ultimately prevail. There is a profound lesson in this for Singapore whose destiny in a Hobbesian world cannot be determined exclusively by herself and whose continued long-term existence is still not assured. Herein lies the continuing relevance of the SAF as a guardian of the peace, and if it is ever called upon to do so, to be also "a flaming sword in the righteous cause of national survival".18

Endnotes

1. Bull, Hedley, *The Anarchical Society,* London, Macmillan Press, 1977, p 184.

2. *Ibid*. War is defined here in the sense in which it is not commonly understood. It refers to general wars between states and excludes intra-state conflicts such as civil wars.

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13. Northedge, T S, *The International Political System* (N.Y., Faber & Faber, 1976), p 276

14. Palit, M G, *War In The Deterrent Age* (N.Y., South Brunswick, 1966), p 204.

15. Creveld, Martin, *Technology and War (*London, Macmillan Press, 1989), p 10.

16. Jervis, Robert, "From Balance To Concert" World Politics, Vol. XXXVIII, Oct 85, No. 1, p 59. The Concert of Europe was characterised by unprecedented co-operation among the major European powers largely because each acted according to its enlightened self-interests to maintain the balance of power.

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Maritime Power in Southeast Asia

by CDRE Teo Chee Hean

It is a great honour to be invited to speak to such a gathering of persons brought together by an interest in maritime and naval affairs.

The approach that I will take is a simple one, from the point of view of a small country. If I may use an analogy from economics, we are a "price taker" rather than a "price fixer"; we have practically no ability to change the geo-strategic environment in which we live and must accept what comes and try to do the best we can in the given set of circumstances. I will begin therefore with a historical survey of Southeast Asia.

I will attempt to demonstrate that the history of Southeast Asia is really the maritime history of Southeast Asia. I have picked my examples deliberately and in the most unacademic way to support this assertion. This survey will help us to appreciate how we got to where we are, and identify constants and trends that will assist in our analysis of maritime power in Southeast Asia today and in the future.

Geography and Early History

Southeast Asia can be divided into continental Southeast Asia - the Indo-Chinese countries Laos, Vietnam and Cambodia, and Burma and Thailand - and maritime Southeast Asia which includes Malaysia, Indonesia, the Philippines, Brunei and Singapore.

Continental Southeast Asia lies between two great Asian powers that have influenced this region - India and China. In continental Southeast Asia, the two powers have vied for power over the centuries as they attempted to expand their own influence and counter that of others. In the colonial period, the various occupying colonial powers superimposed their interests on the region. But even then, the fault lines imposed by geography could still be seen. British and French rivalry resulted in Thailand being accepted as a neutral buffer state between British Burma and French Indochina in the 1800s. Attempts by India and China to gain influence in this area continue into the present day. China, for example, is quite pleased to assist Burma, and India has remained one of Vietnam's most constant friends.

But I touch on continental Southeast Asia only so that I can shift away quickly to what we are more interested in - maritime Southeast Asia.

Maritime Southeast Asia consists of more sea than land. There is the Malay peninsula, several large islands and tens of thousands of small islands. It is not surprising therefore that from early times, power in Southeast Asia was associated with maritime power. One of the earliest documented maritime empires was the Srivijaya Empire centred near Palembang in central Sumatra. Srivijaya rose rapidly to power in the latter part of the 7 th century and it extended over both coasts of the Malacca Straits, West Sumatra and western Borneo. It commanded the major trading routes within Southeast Asia as well as the Malacca and Sunda straits - the key routes between the Indian Ocean and the China seas.

But Srivijaya was not without its competitors. It had to face rivals from south Thailand and from as far away as India. Its influence and power eventually declined and by early 14 th century, Srivijaya had been surpassed in maritime Southeast Asia by the Majapahit empire based in east Java and the Sukhothai Kingdom. Both exerted claims on the Malay Peninsula and the area was in considerable turmoil. Also, by the 11 th century, Chinese trading ships had started to appear in greater numbers in Southeast Asia.

Out of this turmoil grew the great trading port of Malacca which was founded at the beginning of the 15 th century. Malacca grew to become the major trading port in Southeast Asia. The Chinese under the Ming

dynasty had decided that they would establish direct trading links in the region, and on the first of his seven great voyages to the Indian Ocean, Admiral Cheng Ho, the famous Chinese admiral, called at Malacca. China extended its protection to Malacca and this helped to deter other regional challenges to its power.

Islam, another major influence in Southeast Asia today arrived with traders from India in the late 13 th and 14 th centuries and its influence had spread to the extent that by the mid-15 th century, Malacca, the pre-eminent trading port in Southeast Asia, was a Muslim sultanate.

At the beginning of the 16 th century, rivalries over the control of sea trade were once again to bring dramatic changes to Southeast Asia. In an effort to break the Arab monopoly on trade between Europe and Asia, the Portuguese decided to establish direct trading links in Asia. The potential riches from the trade persuaded them to embark upon a series of expeditions to gain control of the trade by force. In 1511, the Portuguese attacked and captured Malacca.

But political changes in Europe in the 17 th century and rivalry over who would control the Asian trade, reared its head again and the Dutch became the fierce rivals of the Portuguese in Southeast Asia, eventually conquering Malacca in 1641. The English were not to be left out and they too attempted to set up their own trading ports to rival Malacca. Even as the European powers sought to control the Asian trade, various Southeast Asian trades too were struggling to gain supremacy in Southeast Asia. Sometimes they competed with and fought the Europeans, but at other times they sought alliances of convenience with which to strengthen themselves against their rivals. Aceh in North Sumatra, Johor in South Malaya and Bugis in Sulawesi were some of these rival maritime-based powers.

The English gradually built up their position by establishing themselves in Benkulen in West Sumatra, Borneo and Penang; and in 1819 they established a trading post in Singapore. Dutch and English rivalries intensified, and in 1824, in the Treaty of London, the English and Dutch established their spheres of influence using the Malacca Straits as the demarcating line; they exchanged Benkulen and Malacca. The results of this treaty of 1824 are still evident today and manifest themselves in today's Indonesia, Malaysia, Singapore and Brunei.

English and Dutch dominance in Southeast Asia was to continue until the mid-20 th century. Elsewhere in maritime Southeast Asia, the Spaniards had gained control of the Philippines from the late 16 th century, passing control to the Americans in the late 19 th century after the Spanish-American War.

During WW I, Japan was an ally of the British. But it soon became clear that Japanese and British interests were diverging and naval strategists in Tokyo and in London began to look at what might need to be done in the event of war.

Once again Southeast Asia was to be drawn into centrestage. The British constructed a great naval base in Singapore to support a main fleet that would sail east to defend British interests against Japan. Likewise, the Japanese calculated that in order to succeed, they would have to destroy the American fleet in Pearl Harbor as well as wrest control of Singapore from the British. In both of these, the Japanese succeeded. But as Admiral Yamamoto himself foresaw, the Japanese soon over-extended themselves, and the industrial might of America carried the war to Japan and defeated them.

Following the end of WW II, the exhausted British, Dutch and French had little choice but to allow their colonies in Southeast Asia to become independent. The British withdrew their forces from "East of Suez" in 1971 and left the Five Power Defence Arrangements (FPDA) with Malaysia, Singapore, Australia, New Zealand and the UK to provide a consultative framework for security in Malaysia and Singapore.

The US was left as the strongest military power in Southeast Asia, and turned her attention to keeping the dominoes in Southeast Asia from falling to communism. The war in Vietnam did buy the other fledgling countries in Southeast Asia a few precious years to get on their own feet. Southeast Asia is now enjoying one of the fastest economic growth rates in the world.

Let us pause here to see what lessons geography and history have to offer us about the place of maritime power in Southeast Asia.

Lessons from Geography and History

From our quick survey, I would just like to make three points. Firstly, within Southeast Asia, the exercise of power and influence depends on being able to make use of the seas *within* Southeast Asia. This is clearly illustrated by the long succession of competing powers who have sought to impose their will on maritime Southeast Asia. Each state that flourished succeeded in controlling the sea and the trade that flowed across it. As its power waned, control of the sea and of trade passed on. In the modern context, sea power is necessary to protect the territorial integrity and other maritime interests of the Southeast Asian states. Indonesia, the Philippines and Malaysia clearly have a need to do so in order to retain cohesion among the different parts of their countries widely separated by sea. All the ASEAN states depend on the sea to carry the trade - internal and external - that powers their economies.

Secondly, Southeast Asia lies between the two major Asian powers, India and China. While the land route between India and China is shorter, there are many natural obstacles. The seas provide a more convenient route. Over many centuries, these two countries have left their mark on the culture, religion, language, population and politics of the region. In relatively recent times, China had been the main supporter of communist revolutionary movements throughout Southeast Asia. In 1979, China attacked Vietnam to "teach it a lesson" for invading Cambodia, and China has had considerable influence over the Khmer Rouge in Cambodia. India and China have recently been preoccupied with their own internal problems, but the sheer size of these two countries relative to Southeast Asia means that they must always remain a factor to be considered. As I mentioned earlier, the Chinese take pains to cultivate Indian Ocean states such as Burma, and the Indians likewise, cultivate South China Sea states such as Vietnam. And one can think of a variety of scenarios where the seas in Southeast Asia will become vital to both countries if their rivalry were to be heightened. Even if the two powers were to cooperate, the main thoroughfare would pass through Southeast Asia.

The third point about geography is that Southeast Asia is of interest to countries well beyond the region. It is rich in natural resources and its sea routes are vital for maritime traffic. The Europeans first came to Southeast Asia to secure not only the spices and other trade here, but also the trade routes to China. Today, the commodities and the countries may be different but the region is still a major source of strategic materials such as rubber, tin and oil. Japan, Europe and America depend on the routes in Southeast Asia for the movement of fuel, raw materials and finished products. This is true also for Australia and New Zealand especially since trade with the rapidly growing economies of Japan, Korea, China and Southeast Asia must all transit Southeast Asian waters.

What we can conclude from geography is that regardless of what Southeast Asian nations themselves may wish, Asian and other maritime powers do have important interests in Southeast Asia; and they will continue to want to assert themselves in order to ensure that their interests are not jeopardised. We cannot wish them away even though their presence here may not always totally conform with the desires of regional states to preserve their territorial integrity and security within their waters.

Contemporary Factors

While a study of the major historical trends and geography provide some useful insights on maritime power in Southeast Asia, there are also more recent occurrences which have an impact on this subject. I will deal specifically with two major ones: the changing world geo-strategic situation and the United Nations Convention on the Law of the Sea (UNCLOS).

- ## **The Changing World Geo-Strategic Situation**

The last 20 to 30 years have been a period of relative stability and growth for the countries of maritime Southeast Asia. While war raged in Vietnam and Cambodia, the countries of maritime Southeast Asia were largely insulated from its bad effects.

When viewed against the global setting, these were only part of the post-WW II struggle between Communism and the Free World from which Southeast Asia was not exempt.

One consequence of this struggle was that regional conflicts got subsumed into the bigger game. Neither superpower was prepared to allow too great a change in the power alignments in any region, nor allow a regional conflict to escalate uncontrollably into a direct confrontation between them. This meant that regional conflicts were allowed to simmer and sometimes reach boiling point, but no major upheavals would take place.

But now the struggle is over. The world order, frozen in place for 40 years, has started to unravel. In maritime Southeast Asia, what this means is that a question mark now hangs over the US presence which has provided the security umbrella under which the Southeast Asian states have prospered.

The US finds it increasingly difficult to secure the resources to maintain its force presence in Southeast Asia at current levels.

The medium powers also will not feel as constrained as before by the need to remain allied to one or the other of the superpowers, and can now pursue their own national interests.

While the superpowers have been locked in their struggle, things have not remained unchanged. Japan has emerged as an economic giant. In an era of superpower nuclear rivalry, she was quite content to remain a military midget as her history compelled her to eschew nuclear weapons. But now that the nuclear stand-off is over, her considerable conventional forces and sizeable build-up plan mean that Japan is in a position to adjust her military profile to one more in keeping with her status as an economic superpower.

How can we in Southeast Asia, especially the small countries, respond to this new situation? Singapore, for example, became independent only in 1965, and has lived her entire 26 years of independence within the structure of this Cold War US security umbrella. We have no direct experience of any other regime.

There are few principles that will guide us. Firstly, as any traveller who sets out on a journey into the unknown will tell you, *prepare yourself well*. This is the reason that Singapore, since independence, has been steadily investing in building up her own defence capability. The Singapore Armed Forces today is a source of strength and provides Singaporeans added confidence to face the future. Other ASEAN neighbours, particularly Indonesia, share the same view - that the ASEAN countries should build up their national resilience. With national resilience in each country, there will be no weak links in the region to exploit; and by working together, there will be regional resilience. The region as a whole will be better prepared to face the unknown.

Secondly, *travel with friends* - people you know well, with whom you share common interests, and who have shown themselves to be reliable in the past. This is the reason why the FPDA is so important to us. The FPDA provides us not only the psychological confidence that we have friends, but also provides opportunities for us to constantly train with one another so that we can work together if we ever need to. This is the reason also, that Singapore supports a continued US presence in Southeast Asia. We have offered the use of facilities in Singapore for US fighter aircraft

and naval ships. A continued US presence will provide stability in Southeast Asia in a period of dramatic global changes.

Thirdly, *seek out on your travels new friends*. We need to seek out and constructively engage other powers that are benign and whose interests are coincident. We have to explain ourselves and try to understand them. We would want, for example, to constructively engage Japan so that her foreign and security policies will evolve in a way which are mutually beneficial.

Let us shift now to another recent development that has had a significant impact on maritime power in Southeast Asia.

- ## UNCLOS

UNCLOS has also dramatically changed the map of Southeast Asia. Or it might be more accurate to say that the technology of modern methods of exploiting the resources of the sea - living and non-living - have dramatically changed the way that the states look upon the seas. UNCLOS attempts to balance two sets of competing demands. The first set relates to rights of passage for international shipping versus rights of coastal states to protect their territorial integrity and security. We have alluded to the tension between these two demands in the earlier discussion on geography. I believe that the UNCLOS has come to a reasonable compromise when we apply its provisions to Southeast Asia. While archipelagic states like Indonesia and the Philippines have safeguards for their territorial integrity and security in the archipelagic waters provisions and in the extension of the territorial sea to 12 miles, maritime states like Singapore have safeguards for passage through straits used for international navigation and archipelagic sea lanes.

To illustrate the balancing of competing demands, I will use the Singapore situation as an example. The extension of the territorial sea limits to 12 miles by Malaysia and Indonesia means that Singapore and her territorial waters are completely surrounded by Malaysian and Indonesian territorial waters, and that we have no access to the high seas other than through the territorial waters of our neighbours. For Singapore, the access to sea routes is particularly critical. Singapore's annual trade value is some three times her GDP, and most of it goes by sea. Compared to similar figures for Korea (75 percent), Australia (33 percent) and Japan (25 percent), this trade dependency is one of the highest in the world.

If not for the provisions guaranteeing transit passage through straits used for international navigation, Singapore would literally be in dire straits.

The second set of competing demands refer to the claims for exclusive economic exploitation for the coastal states. In maritime Southeast Asia, this means that states which never previously had boundaries with each other suddenly find that they do, and that these are not at all well defined. Who would have thought that Brunei and Vietnam have a common border or China and Malaysia. Disputes over EEZs have already started and are likely to accelerate. The potentially mineral-rich Spratlys and Paracels are the subject of competing claims. Six countries have laid claim to various parts of Spratlys with China claiming the entire group. The claimants have backed up their claims in several cases with the deployment of military forces. Despite the efforts of Indonesia during the recent conference in Bandung, where for the first time, all the claimants were brought together under one roof, no resolution of the conflicting claims is in sight.

Maritime Power Defined

Thus far, I have been deliberately using the term "maritime power" somewhat loosely without properly defining it. If one were to take a narrow interpretation, then it would mean the ability of a country to impose its will on another in the maritime arena. This definition implies that maritime power is associated with contention. One country's exercise of will over another means that one country is more powerful than the other, and that countries seek to maximise their power in this narrow sense.

I find this interpretation too narrow. I prefer to think of maritime power as the aggregate of a country's ability to make use of the sea in order to fulfil its national economic, security and other goals. This interpretation allows for a rather more cooperative way of looking at maritime power. Instead of imposition of wills, countries can cooperate to mutually increase their maritime power by making use of the sea in a way which they could not before.

If we were to interpret maritime power in the broader sense, then there are cooperative efforts of many different types. For example, combined patrols could be conducted by maritime forces to ensure security. Combined exercises could be conducted to ensure that forces will be capable of working together should the need arise. Much is already being done in this area, with the FPDA being a good example.

But besides security-related efforts, other things can be done to increase the use of the sea. The development and maintenance of a good network of ports will lead to increased trade; and a negotiated agreement on joint exploitation of mineral deposits in areas of overlapping claims would allow each country to enjoy some of the benefits rather than none being able to do so. The arrangements reached between Australia and Indonesia for joint exploitation are a good example.

What Australia Can Do

Let us shift focus just slightly - towards Australia to see where the country fits in and what she can do. Australia has many important interests in Southeast Asia. We are your nearest neighbours and an important trading partner. Your trade route to the rest of Asia pass through Southeast Asian waters.

Australia has had a long history of contributions to Southeast Asia. In WW II, the Malayan Emergency and the Vietnam War, Australian forces played important roles. Without your contributions, I am certain that the picture before us today of Southeast Asia would be quite different. You continue to show a strong commitment to FPDA. We in Singapore, and I am sure also in Malaysia, very much appreciate this commitment.

As partners in FPDA, it is also encouraging to note that Australia has shown a willingness to contribute forces to international operations such as those in the Persian Gulf, to contain aggression and promote peace, even in areas quite distant from Australian shores. This surely is a clear signal that Australia can be counted on as a partner to oppose aggression and preserve peace in the Southeast Asian region.

It is important for Australia to maintain these strong relations in Southeast Asia. To do so effectively, Australia needs to make use of the entire range of tools at its disposal, to build up a good network of economic, political, cultural and military relations. In this way, Australia sends a clear signal that it intends to be very much a part of and a major player in the Asia-Pacific community of states; and Australia will be well positioned to influence Southeast Asian nations to embark on projects that are mutually beneficial.

Main Conclusions

From our survey of geography and history, we concluded firstly that maritime power is important within the region for regional countries themselves in order to maintain their territorial integrity and secure their sea lines of communications.

Secondly, because of Southeast Asia's location between India and China, these two countries cannot be ignored in the long-term even if they are pre-occupied with internal problems in the short-term.

Thirdly, because of the importance of Southeast Asian sea routes to the world trading system, and the value of the natural resources that can be found there, the major powers in the world will always want to be able to influence events in the region.

From our analysis of the changing world geo-strategic situation, our conclusion is that the US security umbrella will give way to a more uncertain situation. Southeast Asian countries would do well to develop national and regional resilience, to build upon old friendships and alliances like FPDA and with the US, and to seek out and develop an understanding with new players like Japan so that their foreign and security policies will develop in a mutually beneficial way.

In considering the effects of UNCLOS, we concluded that UNCLOS has made a positive contribution by balancing competing demands. But the competing claims that result from the extended territorial and EEZ regimes open new areas of potential conflict. Countries should look at maritime power in its widest sense, avoid contention and confrontation, and seek cooperation in order to maximise the aggregate ability of a country to benefit from making use of the sea to fulfil its national economic, security and other goals.

Finally, Australia has much to gain from being a major in Southeast Asia and the larger Asia-Pacific community. Australia should use the entire range of tools at her disposal to build up a good network of economic, political, cultural and military relations.

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Not by Technology Alone Military Technology in Perspective

by LTC Sng Seow Lian

Technology has often had a pervasive effect on the battlefield, with victory often the result of the possession of a particular type of weapon. The longbow for example, outperformed the crossbow and was the reason for the English victory over the French at the battle of Crecy in 1346. Although the importance of technology has been proven from time to time, it is relevant to ask whether it is the most important determinant of victory on the battlefield, or whether there are other equally important, if not more important determinants. This question has become critically important in the light of escalating costs of new weapons. State-of-the-art equipment like the Stealth fighter is not only beyond the financial reach of most countries (with the US probably the only country able to afford it), it is also difficult and costly to operate and maintain. What is more, reports indicate that new technology is possible which will neutralise its main selling point and reduce it to an ordinary stealthless fighter.

This is the reality about military technology. New technology may give its owner an edge but that advantage is soon nullified as the enemy develops newer weapons and tactics to get around the problem. Another reality about weapons development is the long lead time between conceptualisation of an idea and end-production so that new weapons are, in a sense, already obsolete by the time they reach their users. And, under the pressure of war, quality does not always match expectations in which case, reliance is often placed on quantity to make good the shortcoming, if it can. For example in 1942, the Soviets produced thousands of T-60 light tanks although they were no match against the German ones. Several hundred thousand small-calibre anti-tank rifles were also produced which could not penetrate German armour.1

Despite these realities, no army can afford to ignore the need for a qualitative upgrading of its weapons inventory from time to time. There is no requirement to keep pace with the ever-shifting frontier of technology but enough should be done for an army to cope with its potential adversaries. All things being equal, an army with better weapons must surely overwhelm an army with inferior weapons. However, there are instances where quantity can triumph over innovation, as the victory of the Soviet Union over Germany in WW II suggests. Unfortunately, that kind of option is not available to countries with smaller populations and resources. Hence, we need to return to the question: How important is military technology vis-�-vis other influencing factors as a determinant of victory on the modern battlefield? To answer this question, we will survey some of the major wars that have taken place in the 20 th century.

It is not entirely adequate to explain the determinants of an armed forces' victory without at the same time explaining the reasons that account for its opponent's defeat. We will therefore look at both sides of the picture wherever possible. The evaluation of the importance of military technology in these wars will also be done in relation to the role played by intellectual, political and social forces. While the terms 'political forces' and 'social forces' are self-explanatory, the term 'intellectual forces' would be taken to mean factors like theory, strategy, tactics, doctrine, organisation, leadership and morale, etc.

The Western Front in the First World War

Technology was mainly responsible for shaping the battlefields of the First World War. Decisive battles which were possible in previous wars were now out of the question because of the use of a range of weapons which gave immense power to the defence. Rifles and artillery were now of longer range and greater accuracy. For protection against their deadly barrage of iron and explosives, the armies had to dig in. The humble spade became an indispensable tool for the individual soldier. And to protect themselves against infantry assaults, belts of wire obstacles were created and covered by machine guns which spewed death at the hapless troops caught crossing 'no-man's land'.2 The newly-invented airplane contributed its share to the defence for aerial reconnaissance made it difficult for surprise in attack. Under such circumstances, infantry troops could no longer mount an attack without suffering frightful casualties. The impact of

technology was therefore huge, not in terms of bringing the war to a quick end, but rather in prolonging it at enormous cost to all the countries involved. Far from being a determinant of victory in WW I, technology actually made it elusive.

There were other factors which were equally blame-worthy. The intellectuals of the time were unable to rise to the challenges of modern technology. Indeed, the war was fought with 20 th century weapons by generals drilled in 19 th century tactics. All the powers involved, especially the French, believed in the tactical offensive which of course was akin to a death wish each time it was mounted. Neither commanders nor thinkers were able to devise new strategies and doctrines to overcome the new technology, to bring about victory and an end to the slaughter. In short, technology outran strategy, tactics and doctrine.

In a sense, it was political-social forces that decided the outcome of the First World War. Pre-war European Social Darwinians had been propounding the belief that nations, like animals, were subjected to natural laws governing the survival of the fittest. Therefore, a nation's fitness to survive depended on the readiness of its people to die.3 To qualify as a Great Power, a nation must be ready and able to outlast the enemy in the slugging match, no matter how bloody, painful or protracted. Public education and military service emphasised duty to the nation and bred a sense of cohesion and national identity. Hence, when the call of duty came, the peoples of the countries involved responded readily. Seen this way, it was political-social forces in the form of nationalism and Social Darwinism that accounted for Germany's defeat when, totally exhausted, it could no longer match the Western allies' will to survive. Technology changed the shape of the battles, but political-social forces decided the outcome of the war.

Western Europe in the Second World War

The Second World War was, in contrast with the first, a war in which the opening moves by the German forces brought spectacular victories. In the conquest of Western Europe, the Wehrmacht made extensive use of the tank, the airplane and artillery. On the surface, these weapons appeared to have been the main determinant of the victories. On closer analysis, however, it was not so much the weapons but more the way in which they were used by the Germans that made the difference.

Under General Heinz Guderian, these weapons were integrated into a tactical system known as *blitzkrieg*. Tanks, artillery and motorised infantry were combined in cohesive panzer divisions with dive bombers providing tactical support. In the attack, tanks supported by artillery and dive bombers would break through enemy lines, then penetrate deeply to his rear areas to destroy his headquarters and lines of communications, at the same time opening a path for infantry to follow through to mop up resistance and to occupy the ground. Using this tactic, swift and devastating victories were won in Western Europe. There was no reliance on a single technology. *Blitzkrieg* successes were a resounding triumph for intellectual forces.

Ironically, it was British intellectuals who inspired Guderian and provided him with ideas for his dazzling doctrine. J F C Fuller had been advocating the use of tanks to strike deeply into enemy territory and to destroy his headquarters with the objective of disrupting the command system and paralysing the troops at the front. His compatriot, Liddell Hart, argued for the use of combined arms formations using tanks to break through enemy lines and to open a gap through which composite forces would pour through in an 'expanding torrent' for further operations. France too had visionaries like General J B Estienne and Colonel Charles de Gaulle who advocated mechanised combined arms forces that could take to the offensive. The intellectual output amounted to a revolution in tactics but only the Germans took notice. Guderian's blitzkrieg was endorsed by Hitler who was himself fascinated by technology.4 In Britain and especially France, the climate of opinion was markedly different. The governments and the high commands rejected the counsels of their intellectuals - with disastrous consequences.

Britain was short of funds and had turned insular. In the case of France, the rejection of new offensive doctrines was symptomatic of a deeper malaise afflicting the entire nation. The carnage of WW I brought about a passive attitude towards military affairs, not only in the armed forces but also amongst the people. This was reflected in their inability to keep abreast with the post-war military revolution brought about by the maturation of the tank and the airplane. Notwithstanding intelligence reports that the Germans were

basing their future army on armoured forces, the French continued to place their faith in the tactical doctrines of the previous war. When Estienne and De Gaulle called for the establishment of armoured forces, France was in no mood to listen. That mental atrophy had set in was evident from the construction of the Maginot Line: a technological marvel of fortifications constructed at great cost but at the wrong place. In May 1940, France was caught by surprise when panzer divisions skirted the Maginot Line and attacked through the Ardennes. French technology provided an engineering marvel but German strategy and tactics made it irrelevant. Political, social and intellectual forces accounted for France's defeat as much as they accounted for Germany's victory.

War on the Korean Peninsula

Technological developments during WW II ushered in the age of nuclear weapons. Two concepts emerged: one, that the atom bomb had made land warfare obsolete; the other, that possession of the bomb conferred on its owner exceptional power or immunity against attack.5 When a 135,000-strong North Korean army invaded South Korea in June 1950, these concepts were shattered. The US, a victor of WW II, could not use the bomb to stem the North Korean offensive. The use of the bomb in pursuit of a foreign policy objective which had nothing to do with US security would have established a dangerous precedent for other nuclear powers in the future. Besides this, the US would have lost its moral standing with the rest of the world. The new technology was a war-winning weapon, but only if it could be used.

From June to August 1950, North Korean forces surged down the peninsula, forcing South Korean forces and American reinforcements from the Eighth Army commanded by General Walton Walker to retreat southwards until they established themselves on a small enclave around the port city of Pusan. The first victory went to the North Koreans. This outcome was due partly to the poor state of readiness amongst American troops, as well as to North Korean superiority in equipment, for their Soviet-built T-34 tanks were invulnerable to the 2.35 inch bazookas of the Americans.

What occurred next would rank as one of the most brilliant of operations ever conducted in the history of warfare. General Douglas MacArthur, who commanded the United Nations forces fighting the North Koreans, conceived of a master-stroke which if successful would cut off the bulk of the enemy from his rear areas and his sources of supply. On 15 September, against reservations from the Joint Chiefs of Staff and most of his subordinates, MacArthur made the daring move to land the X Corps (comprising a marine division and an infantry division) high up the west coast of Korea at Inchon. Surprise was complete and the 70,000-strong force advanced towards Seoul. Five days later, the Eighth Army under General Walker broke out of the Pusan Perimeter and linked up with the X Corps on 27 September. Trapped between the two forces, North Korean forces disintegrated with only 30,000 managing to escape death or capture by fleeing back across the 38 th Parallel.7 Intellectual forces in the form of leadership, daring, brilliance in planning at the operational level and in the execution of the plan, were the determinants of victory. Had the X Corps merely landed at Pusan to reinforce the Eighth Army, a subsequent breakout from the perimeter could not have been possible without heavy casualties.

As the UN forces under MacArthur maintained the offensive and proceeded towards the Yalu river, 300,000 Chinese troops launched a massive counter-offensive south of the Yalu on 26 November. The X Corp and the Eighth Army were sent reeling southwards; it was a military disaster. As Cohen and Gooch observed:

ROK divisions simply disappeared from the situation maps. For the first time since the Battle of the Bulge in 1944, official reports referred to whole American divisions as 'combat ineffective' ... UN forces tumbled south, and the Joint Chiefs of Staff authorized MacArthur to begin planning for the liquidation of the Korean commitment.8

It was the longest uninterrupted retreat of the US Army in history, coming to a halt only in January 1951, just south of Seoul. What was the cause of the disaster? Unlike previous wars, Korea was a manifestation of the Cold War. For this reason, President Truman tried to keep the conflict limited in order to avoid a direct conflict with the Soviet Union and China.9 The fact that the Chinese intervened despite US efforts not to be provocative suggests that there was intelligence failure in the assessment of the signals which the Chinese

had been putting out through propaganda broadcasts and warnings conveyed by the Indian Ambassador to China that they would not tolerate an advance to the Yalu. In a sense, political forces put a stop to what would otherwise have been a victory for UN forces and South Korea. Furthermore, when the Chinese launched their offensive, political considerations to limit the war dissuaded the US from bombing Chinese forces and bases across the Yalu.10 If not for this restriction, US forces might have stood their ground better in November 1950.

As is to be expected of a developed country fighting a Third World enemy, the American had technological superiority over the Communists in armour, artillery and aircraft. Between 1951 and 1953, US aircraft downed 850 Mig-15s for the loss of only 58 of their own.11 Communist soldiers were basically hardy infantrymen armed with automatic small-arms. However, the outcomes of offensives at each stage of the war were decided not by the technological merit but by politics and skill in the operational art.

The Egyptian Front in the Yom Kippur War

If technology is a determinant of victory on the battlefield, the Egyptians ought to have proven it during the opening battle of the Yom Kippur War of 1973. But this did not happen as other factors influenced much more directly the outcome of subsequent battles and especially in the final ending of the war. While the Arabs and the Israelis fought monumental tank battles on the ground, it turned out, as we shall see later, that the outcome would be 'decided' by political forces.

On 6 October 1973, Egyptian and Syrian forces attempted to re-capture territories lost in the Six Day War when they attacked Israel simultaneously on two fronts at 1405 hours. Surprise was complete although the Israelis had been receiving signals indicating that an attack was imminent. Surprise was an essential element in the successful Egyptian crossing of the Suez canal but it was the way the crossing was conducted that ranks it, in the words of Chris Bellamy, as "one of the greatest military, engineering and logistical achievements of modern land warfare."12

Time was a critical element in the projection of combat power onto the far bank because Israeli armoured divisions were expected to counter-attack once their mobilisation had been completed. It was critical to get the tanks across once the infantry had secured enough protection for bridging operations. Twenty-five metre high embankments on the Israeli side presented what appeared to be formidable obstacles against crossing operations. However, the Egyptians had devised an ingenious method of overcoming the walls using high-pressure water jets rather than conventional explosives. The Israelis had expected the Egyptians to take between 1 1 /2 to 2 days to create a few gaps using explosives and bulldozers. In the event, slots were hosed down within hours and ten float bridges were in place by dusk. The bridging equipment, both home-made and Soviet-supplied, were marvels of design and engineering, consisting of pontoons which could be launched and assembled over the 200- metre gap within a couple of hours. By 2000 hours, there were 80,000 Egyptian troops and several hundred tanks on the east bank.

To protect the bridgeheads, the Egyptians had earlier infiltrated some 8,000 troops armed with man-portable anti-tank weapons and anti-aircraft missiles two kilometres into Israeli-held territory. Thus when the Israelis attacked, their tanks ran into a deadly barrage of Sagger guided-missiles which had the range of 2-3,000 metres. The Israelis were aware that the Egyptians possessed this weapon and knew of its capabilities but it was the scale and the coherent manner in which they were used that caught them by surprise. Israeli aircraft which attacked the Egyptians were also effectively countered by a dense air defence barrage consisting of SA-2, SA-3 and SA-6 missiles on the west bank and the lighter, previously-infiltrated Strella SA-7 missiles on the east bank. At least half of the first attacking Israeli planes were shot down by the missiles' unexpectedly accurate and devastating fire.13

The Egyptians' success in achieving strategic and tactical surprise and their clever use of technology up to 8 October inflicted upon the Israelis their worst defeat in history.14 The main component of the Egyptian plan was to neutralise Israel's superiority in the air and in armoured warfare. This had been accomplished admirably but beyond the well-rehearsed crossing operations and use of anti-tank and anti-air weapons, the

Egyptians were not able to exploit their success. They sat tight consolidating their bridgehead thereby allowing the Israelis time to recover and regain the initiative.

In the final phase of the war on the Suez front, an Israeli armoured force under General Arik Sharon crossed to the west bank to execute an operation in the boldest tradition of Guderian's tactics - the *blitzkrieg*. Before the bridgehead could be secured, Sharon penetrated deeply to create confusion in the Egyptians' rear areas and after swinging around, encircled and trapped the Egyptian 3 rd Army. If not for the intervention of the superpowers, the destruction of the 3 rd Army would have ended in a decisive Israeli victory on the Egyptian front. Superior initiative, daring and skill at mobile warfare explained the Israeli success as much as the lack of them explained the Egyptians' inability to exploit the earlier opportunities granted by technology.

The US and the Soviet Union did not wish to see their respective proxies defeated although a draw would have been acceptable to both. Two cease-fires had already been effected but both did not last. When it became clear that the Israelis were on the verge of annihilating the 3 rd Army, the Soviet Union warned the US that they would intervene directly if Israel did not stop its onslaught on the west bank.15 Hence on 25 October, Washington exerted heavy influence on the Israelis to refrain from further military moves and to accept a cease-fire. In fact, pressure was also put on the Israelis to allow food, water, medicine and non-military supplies to reach the 3rd Army.

The influence of politics on the outcome was further illustrated by the role of the US Secretary of State, Henry Kissinger. He was essentially in favour of equilibrium between Israel and the Arabs. Before the start of hostilities, Kissinger had warned the Israelis not to conduct a pre-emptive attack as he perceived Israel to be the stronger side. When the Egyptians and Syrians held the initiative in the opening battles, he began to provide military aid to Israel to restore the balance. Then when the Israelis began to gain the upper hand, he switched sides again and demanded the deliverance of the 3 rd Army. When a cease-fire was eventually effected, both sides were exhausted and roughly even which was exactly what Kissinger wanted. In his view, there could be no peace in the Middle-East were the Egyptians to be defeated again.16

In analysing the initial success of the Egyptians, it is easy to attribute it to the advanced Soviet technology at their disposal. On second thought, their success was due to the Israeli failure to launch a pre-emptive air strike against troop concentrations preparing for the attack. The Egyptian and Syrian H-Hour was set at 1405 hours on 6 October. But earlier in the morning at 0600 hours, the Israeli Chief of the General Staff, General Elazar, was informed that there were "clear, unmistakable and undeniable" signs that the two Arab armies would start a war that day.17 Had the Israelis launched a pre-emptive air strike at that point in time, the shape of the war would have been different. As it was, Elazar's plea to the Prime Minister for permission to pre-empt the Arabs was disallowed on the grounds that it "was politically impossible", and that if a war came "there must be no doubt in the eyes of the world that it had been started by the Arabs".18 Apparently, it also transpired that Kissinger and the US Ambassador had more than once told Israeli diplomats that "there could be no US aid to Israel in a future war if the Israelis fired the first shots".19 In other words, politics, both domestic and international, did more to shape the final outcome of the Yom Kippur War than technology.

Low Intensity Conflicts - The Vietnam War

Thus far we have examined the influence of technology and intellectual, political and social forces in determining the outcome of conventional wars. As the trend of warfare in the post-1945 period is towards low-intensity conflicts, it behoves us to examine these factors in the context of such unconventional or irregular wars. We will find that in these wars, technology or the lack of it had no bearing on the outcomes of the wars. Indeed, given technology's capacity for destruction and violence, and the temptation of conventional forces to use it as a substitute for more tedious (although more promising) methods, it is a matter for wonder whether conventional forces would not be better off with lesser amounts of it. A look at the Vietnam War is instructive.

The commitment of US ground forces to fight the insurgency in South Vietnam began in 1965. Despite the commitment of large numbers of troops which at its height reached half a million, American forces and their

allies were eventually defeated. From the start, US forces resorted to the massive use of firepower in the search for quick victory. As Peter M Dunn has observed:

The firepower brought to bear on the enemy - when he could be found - was almost incomprehensible in its enormity and its disparity when measured against the firepower available to the enemy.20

Note also the following observation from Arthur H Westing:

The US strategy involved massive rural-area bombing as well as chemical and mechanical forest destruction; systematic large-scale crop destruction by a variety of mechanical, chemical and other techniques; and the destruction of untold thousands, of towns, small villages, bridges, hospitals and so forth. As part of its general warfare programme, the USA directed unprecedented quantities of anti-plant chemical-warfare agents - more than 90 million kilograms - against forest and agricultural lands.21

However, such a technologically-centred strategy, besides being senseless, costly, destructive and*counter-productive*, involved a high proportion of men in service and support roles. According to Dunn, out of the 500,000 US soldiers available in 1968-9, only 80,000 actual fighters could be fielded.22 On the other hand, the Viet Cong were modestly equipped, while a majority of the organisation's members were fighters. It was not until the final stages of the war when regular North Vietnamese troops were thrown in, that tanks and other trappings of conventional forces were found in the opposition. Despite the primitive nature of their technology, the Communists eventually defeated a superpower. Obviously, there were forces which worked to the advantage of the Communists.

The fundamental problem for the Americans was their failure to understand that the war was not a military confrontation alone and that it had political, economic and psychological dimensions of strategy as well. For example, it was not sufficiently understood that the peasants' dissatisfaction with the corrupt South Vietnamese government gave strength to the Communists. Without this understanding, there was an obsession with the need to destroy the enemy's forces, rather than to win the 'hearts and minds' of the people. This strategy was flawed. Indeed, as Michael Brown put it: "To the degree that the application of the classical principles of war had an adverse effect on the economic and political life of the Vietnamese, it was counterproductive."23

A British expert in counter-insurgency, Sir Robert Thompson, suggested a plan which had worked successfully in the Malayan Emergency. The plan emphasised the need to give primacy to civilian authorities, to win the allegiance of the rural peasants, to re-settle populations from enemy areas, to clear insurgents from an area and then to pacify it.24 It was a slow and patient approach but the Americans preferred to move rapidly against the enemy, using military forces rather than civilian forces, and relying on 'search and destroy' missions that caused much destruction and suffering to the innocents.

As the war dragged on and the casualties mounted, public support within the US wavered. The erosion of public support was in part due to the way the media reported the war as well as to Hanoi's skill in exploiting the newsmen's naivety. The turning point came when the Tet Offensive of 1968 proved that the insurgency was still far from being defeated despite government claims to the contrary. Without public support, the US war effort was doomed as much as the Communists' strength was sustained by the peasants' support.

As in Korea, the US also had limited political objectives in Vietnam. The aim was to defeat insurgency without causing the Chinese to intervene directly. For this reason, allied forces were not allowed to venture beyond the 17 th Parallel into North Vietnam in pursuit of the insurgents or to destroy their sanctuaries. This was a severe handicap which the Communists exploited. The sanctity of international boundaries was also disregarded, for bases were established in neighbouring Laos and Cambodia, both of which also served as supply conduits in the form of the 'Ho Chi Minh Trail'.

The outcome of the war was a defeat for the US. American forces were withdrawn in 1973, leaving the South Vietnamese forces to fight their own war until they too collapsed in 1975. The Communist victory was

certainly not determined by technology but by intellectual, social and political forces. Indeed, if technology had been a decisive factor, the US would have won the war with ease.

The American experience was later to be repeated in Afghanistan where the Soviets found that armoured divisions and unusable nuclear weapons were irrelevant in the battle with Afghan nationalism and religious faith. The American experience in Vietnam where technology counted for little was not unique in the post-1945 period. In the years following the end of WW II, colonial powers fought very hard to keep their empires. They used well-equipped conventional forces against poorly-equipped insurgents who often went barefooted. As Martin van Creveld noted, these powers failed in every case.25 An exception, and a rare one, was Malaya where unique political, social and intellectual forces denied the Malayan Communist Party (MCP) a victory. There, the British had the peoples' support for a number of reasons. Firstly, the MCP was a Chinese-based party in a country with a Malay majority. Secondly, the British had promised to give Malaya independence after the defeat of the insurgency. Thirdly, the sound strategy which Robert Thompson had prescribed for Vietnam was instrumental in the battle for 'hearts and minds'. It is also significant to note that the British did not use firepower and technology the same way as the Americans did in Vietnam.

Elsewhere, the record for well-equipped conventional forces is poor. Superiority in technology did not help the British, the French, the Belgians, the Dutch, the Spaniards, the Portuguese, and the South Africans to put down insurgencies. Social and political forces (in particular nationalism and political ideology) were the deciding factors. In more recent years, we have also seen how the much vaunted Vietnamese Army was not able to put down the rag-tag Khmer Rouge. We also witnessed the formidable Israelis succumbing to the inevitable after failing to put down the Intifida.

Conclusion

It is likely that military technology will be even more visible in the way armies plan and fight in the future. Although this survey of 20 th century conflicts shows that superiority in technology is no guarantee for success, it is undeniable that technology is a 'force multiplier'. But without well-trained troops and a well-conceived strategy there is nothing to 'multiply'. An anecdote here is illustrative. In the summer of 1982, the Israelis fought the Syrians in the Battle of the Bekaa Valley. The short operation was an enormous success for the Israelis who destroyed a complete air defence system, including 20 SAM batteries and 85 fighter aircraft in aerial combat for the loss of only two aircraft to ground fire. Following the event, US historian Trevor Dupuy asked an Arab general whether or not the Israeli victory was indicative of the superiority of American technology over that of the USSR. The Arab general replied:

Soviet weapons are good. In most aspects, they are as good as your weapons, maybe even better in some ways. They are usually simpler and easier to maintain, and thus easier for Arab soldiers, like the Syrians, to use. No, it was not the superiority of American weapons over Soviet weapons which made the difference in the Bekaa Valley.26

Although the Arab general did not elaborate, it is quite clear what he had in his mind. In war, the human and intellectual elements are therefore important. Martin van Creveld agrees as much when he observed that "there is no weapon ... and no technology so perfect that it cannot, in principle at any rate, be countered with the aid of the appropriate organisation, training and doctrine.27 And the fortuitous influence of political and social forces too, we might add.

What about the Gulf War of 1991? Many analysts, writing in the immediate aftermath of the war, attributed the success of the Coalition forces to the use of high-technology weapons. This conclusion has come into question as more detailed assessments become possible with the benefit of time. As John Mueller put it, "It seems clear that the outcome of the war was chiefly determined by the low state of Iraqi morale and by the considerable inadequacy of their leadership, not by the precision or effectiveness of American firepower..."28

This brief survey should not create the impression that technology is irrelevant as an ingredient for battlefield success. What it has sought to do is to highlight the fact that there are other factors that are

equally important, and which should therefore be considered in peacetime planning, development and training. What Henri Jomini wrote in the 19 th century bears repeating here: "The superiority of armament may increase the chances of success in war: it does not, of itself, gain battles."29

So what is new? The point really is that the best weapons that money can buy are of little use if our soldiers are not sufficiently trained to operate them, or if our people are not cohesive and psychologically prepared for war, or if we fail to use diplomacy to our advantage in order that strong and reliable friends are at hand when needed. There is a danger that modern weapons and weapon systems might lull us into a false sense of security. We ought to ask whether we are comfortable operating sophisticated high-technology weapons. To begin with, are we comfortable operating and maintaining the humble MILES system during training? Has our doctrine taken new weapons into consideration? Indeed, are we comfortable with our doctrine? Have we got enough people to review and formulate doctrine? Have we taken note of the trend towards low intensity conflicts and prepared ourselves accordingly? Lean organisations make sense in the commercial world; in any case, the result of overly lean commercial organisations is immediately obvious. In the armed forces, the result is not so readily apparent, and is usually realised only when the price is paid in blood. Are SAF units and organisations sufficiently staffed to ensure that we are operationally ready, that we do a proper job of training, doctrine development and equipment maintenance?

These are important questions that should be addressed from time to time if we are to master the technologies at our disposal without, at the same time, being overly dependent on them.

Still, to repeat a point made earlier, all things being equal, an army with better weapons must surely overwhelm an army with interior arms. It pays to remember that during the Falklands War in April 1982, one modern British submarine kept the entire Argentine navy at home while one Exocet missile destroyed a British ship. Technology will forever be an essential element of combat power and an important determinant of victory on the modern battlefield but intellectual, political and social forces can influence operations to as great or greater an extent.

Endnotes

1. Earl F Ziemke, 'Military Effectiveness in the Second World War", Allan R Millet and Williamson Murray (eds),*Military Effectiveness, Volume III, The Second World War*, London 1988, p.283.

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3. Michael Howard, "Men Against Fire: The Doctrine of the Offensive in 1914" in the *The Lessons of History*, Oxford, 1993, p. 123.

4. Hew Strachan, *European Armies and the Conduct of War*, London, 1983, p. 162. Not everyone agreed with Guderian. The Chief of General Staff, General Ludwig von Beck saw the mass army, not armour, as the decisive instrument in war. The outcome of the battle for France might have turned out differently had Hitler agreed with Beck.

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6. Max Hastings, The Korean War, London, 1987, p. 5.

7. Larry H Addington, *The Patterns of War Since the Eighteenth Century*, London, 1984, p.256.

8. Eliot A Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War*, New York, 1990, p. 168.

9. Carver, *Op Cit.*, p. 780

10. *Ibid.*

11. Addington, *Op. Cit*. p. 260.

12. Chris Bellamy, *The Future of Land Warfare*, London, 1987, p.10.

13. *Ibid.*, p.419

14. *Ibid.*, p.433.

15. Paul Jabber and Roman Kolkowicz, "The Arab-Israeli Wars of 1967 and 1973" in Stephens S Kaplan (ed),*Diplomacy of Power: Soviet Armed Forces as a Political Instrument*, Washington DC, 1981, p.455.

16. John G Stoessigner, *Why Nations Go to War*, New York, 1990, p.173.

17. Trevor N Dupuy, *Elusive Victory: The Arab-Israeli Wars, 1947-74*, London, 1978, p. 408

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21. Arthur H Westing, "How Much Damage Can Modern War Create?" in Frank Barnaby, *Future and War: Armed Conflict in the Next Decade*, New York, 1984, p.116

22. *Ibid.*, p. 103

23. Michael L Brown, "Vietnam: Learning from the Debate", *Military Review*, Feb 1987, pp. 49-50.

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25. Martin van Creveld, *The Transformation of Wa*r, New York, 1991, pp. 22-3

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27. Van Creveld, *Technology and War: From 2000 BC to the Present*, New York, 1989, p.230

28. John Mueller, "The Perfect Enemy: Assessing the Gulf War", *Security Studies 5*, No. 1 Autumn 1995, p. 106

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Is China Predisposed to Using Force? Confucian-Mencian and Sunzi Paradigms in Chinese Strategic Culture

by MAJ Goh Kong Yong

Amidst the changing security order in the post-Cold War era, the spectre of a "Chinese threat" looms large.1 To be sure, there is no shortage of opponents to the "Chinese threat" proposition. 2 The uncertainties about China's future capabilities and intentions have nevertheless, instilled a sense of unpredictability regarding Chinese behaviour as a rising power, if not a hegemony, in the post-Cold War international system, which is itself in a great flux.3 Moreover, the prevalence of China's domestic problems does not help but further complicate the issue.4

Currently, the "Chinese threat" proponents base their assessments largely on structural realism, which runs the gamut from an expansionist economic and potential superpower led by a repressive authoritarian and highly nationalistic Chinese Communist Party, to a splintered nation, permeated with corruption and convulsed by civil conflicts. In essence, the structural realists view China as no different from any classic rising power, with potentially aggressive intent, propensity to challenge the status-quo and a strong urge to re-define the rule of the game on its own terms. Despite the plausibility of these hard arguments 5 , the structural realists have very often misjudged China's policy and failed to understand the perceived Chinese over-reaction to certain events. A good case in point is the way China took offence at the US for granting Lee Teng-hui permission to visit the US in 1995, which led eventually to the Taiwan Strait crisis. In this aspect, structural realism is not so much wrong as incomplete in accounting for China's strategic behaviours. Structural realists have apparently under-estimated, if not completely ignored, the influence of a Chinese strategic culture on Chinese policy-makers by which attach policy significance to a structure of symbols and ideas about values of using force and interstate relations.6 Very often the nuances of the Chinese security policy can only be grasped by understanding the Chinese strategic culture.

Therefore while recognising the inadequacy of assessing the "Chinese threat" solely by "soft arguments", strategic culture may provide a good starting point in understanding China's behavioural pattern, more importantly, its tendency to use force, and in certain cases, provide a complementary perspective to the structural realist approach. This paper suggests that contrary to popular belief, Chinese strategic culture is characterised not only by the Confucian-Mencian paradigm, but also the Sunzi paradigm (which stands for the well-known concept, 'si pacem parabellum', meaning, "If you want peace, prepare for war").7 This paper thus argues that when China is weak or fragmented, the Sunzi paradigm prevails. Presently, China is predisposed to using force, which is reflective of the predominance of the Sunzi paradigm.

The Relevance of Strategic Culture and its Definition

International conflicts, regardless of their underlying causes, Michael Howard argues, begins with decisions based on the calculation that they could achieve more by using force.8 In making this calculation, two sets of factors apparently come into play. On the one hand lie the "objective" inputs, which include information and knowledge on the strategic environment, one's enemy, his capabilities and disposition. On the other hand, an indispensable but "subjective" set of guides, shaping the decision-maker's interpretation of facts, lending potency to his intuition, but at the same time a potential source of prejudice and self-deception.9 One may be quick in pointing out the job of the decision-makers to be as hard-headed and free of pre-conceptions as possible, hence making calculation only on the basis of facts. A closer look at the process of "objective" analysis nevertheless, suggests that "facts" are often no more than perception, subject to the distortion of a mental prism, which in this case, are conditioned by the decision-makers' inherent strategic culture.10 Today's decision-makers in Beijing are no exception.

Yitzhak Klein defines strategic culture as "the set of attitudes and beliefs held within a military establishment concerning the political objectives of war and the most effective strategy and operational method of

achieving it."11 In a broader sense, strategic culture embodies a set of strategic preferences derived from the central paradigmatic assumptions about the nature of conflict and the enemy.12 Central to the notion of a strategic culture is a set of basic assumptions shared among the decision-makers about the threat perception, interstate relations, and the efficacy of the use of force.13 Also strategic culture obviously possesses an interactive dynamic, taking into account the feedback from one's experience interacting with the strategic environment.

Although it may not necessarily be true for the other states, Alastair Iain Johnston concludes, at least in the case of China, there exists a long-term and deep-rooted strategic culture, conditioning Chinese predisposition regarding the use of force.14 Likewise, in his empirical study on the Ming dynasty, Arthur Waldron has observed a discernible strategic culture governing Ming's security policy. Also, he concludes that, "[s]imilar patterns have emerged in other periods of Chinese history as well, including the present."15

The Confucian-Mencian and Sunzi Paradigms in Chinese Strategic Culture

There seems to be little doubt that Chinese strategic behaviours are rooted in its "deep" history and culture.16 In this regard, contemporary scholars have been too willing to assume the overriding influence of Confucianism on Chinese strategic thinking. Given China's rich and diverse historical and cultural heritage, two distinct and separate sets of traits inherent in Chinese strategic culture can be discerned. One epitomised by Confucian-Mencianism. The other epitomised by Sunzi, who drew his inspiration primarily from historical experiences during the periods of the Warring States and the Three Kingdoms, and has continually been reinforced whenever the Chinese state was weak or fragmented.17 By the same token, there exist two conflicting views on interstate relations in Chinese strategic culture: the Confucian-Mencian moral-hierarchical worldview, and the China-among- equals realpolitik worldview.18

- ### Confician-Mencian Paradigm

  The Confucian-Mencian perspective, which Alastair Iain Johnston terms the Confucian-Mencian paradigm, regards the world as harmonious rather than conflictual. Harmony and order can be maintained through virtuous and exemplary behaviour on the part of the ruler. Since order can be achieved through benevolence, virtuous exemplar, and happiness of the subjects, the use of force would be largely unnecessary, and in any case, ranked low in statesmen's repository of tools of statecraft. Indeed, there has been a general understanding that *wu* (warfare or the use of force) and bing (soldiers and weaponry) should be strictly subject to the control of *wen* (civilian rule) and are seldom lavishly expended. The resort to wu is an admission of the bankruptcy in the pursuit of wen, therefore should be the last resort. When the use of force becomes inevitable, it is *famou* (thwart enemy's strategy/plan) rather than *fabing* (attack enemy's armed force), as well as defensive rather than offensive, that should be preferred.19

- ### *Parabellum* paradigm

  In contrast, the Sunzi perspective, which Alastair Iain Johnston terms as Parabellum paradigm, does not view the world as harmonious. Conflict is believed to be a constant phenomenon and interstate relations zero-sum in nature. Peaceful environment is but a temporal hiatus during which potential aggressors are preparing for future attacks. The use of force is therefore, not a choice but an imperative for the advancement of state interests; and more often than not, for the very survival of the state. Hence the best way to ensure security is by eliminating the sources of insecurity which in most cases, involve the destruction of the adversaries, real or otherwise. Since the use of force is inevitable, offensive is preferred to defensive. Indeed linguistically, Parabellum finds its parallels in the Chinese idioms, *ju an si wei* (thinking about danger and threat while residing in peace) and*you bei wu huan* (with sufficient military preparation there will be no calamities).20

The predominance of the Confucian-Mencian paradigm during the larger part of Chinese history is clearly borne out by historical records. Chinese predisposition of placing virtue, benevolence and accommodation over coercion, violence and confrontation was underlined by a worldview that the Middle Kingdom was at the centre of the universe, possessing superior capacity in generating the materials for both welfare and warfare. Indeed, even at the height of the dynastic history of Han and Tang, China had harboured no expansionist ambition. Seldom were military forces employed to eradicate adversaries. Instead, efforts were made to subdue and pacify them through moral persuasion, sinicisation, occasional accommodation, and very often, inter-marriages between the royal households.21

Ironically, it was when the Chinese state experienced declining fortunes that saw the temporary ascendancy of the Sunzi paradigm.22 This paradigm was particularly prominent after the decline of the Qing dynasty and the advent of the *Shame and Humiliation Century.*The constant threat to China's security and indeed to its very survival;The Art of Strategy (London, 1988) The Sunzi perspective does not view the world as harmonious. Conflict is believed to be a constant phenomenon and interstate relations zero-sum in nature. (Above) A sketch of Sunzi the zero-sum nature of interstate conflicts; the China-among-equals (more often China was less than equal) interstate relations; and the use of force as a necessary evil to defend oneself; together they exerted significant influence on contemporary Chinese statesmen and strategists alike.23

At the risk of being simplistic, one would therefore conclude that the Confucian-Mencian paradigm is likely to be adopted when China is strong and prosperous. When China is relatively weak or fragmented, the Sunzi paradigm becomes predominant.

Is China Predisposed to Using Force in Post-Cold War?

At this juncture, one would naturally ask, has Chinese strategic culture in post-1949 manifested the traditional patterns? What influence has Marxism-Leninism and Mao Zedong had on contemporary Chinese strategic culture? Empirical findings show that the proliferation of Marxist-Leninist rhetoric does not obscure the continued presence of the traditional patterns ie. the Confucian-Mencian and Sunzi paradigms, in contemporary Chinese strategic culture. Marxism-Leninism had nevertheless noticeably lent pre-eminence to the Sunzi paradigm, particularly before the implementation of the Chinese Reform and Open Door policy in the late 70s. Mao Zedong, whose strategic thinking remains the guiding principles of Chinese security policy today, took seriously to heart the Sunzi paradigm of traditional Chinese strategic culture.24 It must however be noted that while at the perceptual level Mao's strategic thinking was clearly steeped in the Sunzi paradigm, at the operational level, it demonstrated sufficient flexibility in accepting accommodative and defensive policy as temporary measures. Contemporary Chinese security policy is therefore more flexible and accommodative at the operational level, though Sunzi in conception.25 A case in point is the expedient nature of Chinese co-operative behaviours towards the US vis-à-vis the former Soviet Union in the 70s and early 80s.

Besides, contemporary China's threat perception accentuates its security concerns on territorial integrity and political sovereignty. This is apparently not so much due to Marxist-Leninist influence as the Sunzi paradigm of traditional Chinese strategic culture, reinforced by the experiences of interacting with external powers during the *Shame and Humiliation Century.* Contemporary China hence, regards its territorial boundaries inherited from the Nationalist Government in 1949 as sacrosanct, which occasionally lapsed into the realm of obsession. For this reason, together with the predisposition to use force spurred by the predominant Sunzi paradigm, China entered the Korean War and provided significant assistance to the North Vietnamese in response to a perceived US threat to its territorial sovereignty during the Vietnam War. As a nationalistic state, China feels obliged to assert sovereign control over disputed territory along its borders. In the various attempts to resolve these disputes favourably, the not infrequent resort to military force is however, testimony to the predominance of the Sunzi paradigm in contemporary Chinese strategic thinking.26 This certainly does not augur well for China's future strategic behaviour in the post-Cold War, where there are no shortage of potential flashpoints to fire off China's nationalistic over-zealousness.

The use of force by contemporary China, Chih-yu Shih argues, is a special and extreme mode of diplomatic strategy. It dramatises the Chinese leadership's concerns of the strategic environment. A glance at contemporary Chinese history however, suggests that the Mao Zedong, whose strategic thinking remains the guiding principles of Chinese security policy today, took seriously to heart the Sunzi paradigm of traditional strategic culture. Chinese use of force does not aim at gaining more territory; nor a change in the opponents' domestic politics; nor even a victory on the battlefield. Instead, it aims at demonstrating China's determination to back her words by deeds, as in the 1962 Sino-India War and 1978 invasion of Vietnam; humiliating her opponents (in this case, the Soviet Union), as in the 1969 Zhenbao Islands incident; and challenging a third party (in this case, the US), as in the 1958 shelling of Kinmen and Matsu, to assert China's claim over Taiwan, despite the presence of the US 7 th Fleet near the Taiwan Strait.27 These observations bear out the characteristics of contemporary Chinese strategic thinking, which is the Sunzi paradigm at policy level, but non-expansionistic operationally.

Analysis of China's post-1949 conflict behaviours shows that almost all crises and conflicts involve territorial issues. Also, they were mostly, if not all, initiated by countries other than China. The standard behavioural pattern adopted by China during these crises has been invariably warnings of serious consequences: escalation of rhetoric; mobilisation and troop movements; surprise offensives with limited goals, only to voluntarily retreat to defensive positions; and efforts for negotiated settlements. Most conflicts took place within Chinese territories proper (at least what Beijing believes to be within her "motherland"). Two features are readily identifiable in Chinese behaviour during these territorial conflicts. Firstly, China has been very sensitive to the issue of territorial integrity, hence, the use of force to protect its territories remains a prominent policy option. This is indisputably a manifestation of the Sunzi paradigm. Secondly, China has invariably adopted a measured and circumscribed manner in which force is being applied. In this aspect, and contrary to the Sunzi paradigm emphasising the eradication of the adversary, contemporary Chinese military action at the operational level follow more closely the Confucian-Mencian paradigm, which prefers the exemplar of morality and virtue and calls on ending conflicts once the political goals have been met. The adversaries are to be taught "lessons" rather than be eliminated once and for all, which is consistent with the moral hierarchical worldview of the Confucian-Mencian paradigm.28

Given the aforementioned, one could argue that China is predisposed to using force in the post-Cold War, at least for the time being, particularly with regard to territorial disputes though this is likely to be mitigated by the circumscribed manner in which force is being employed at the operational level, with no imperialist ambition, and certainly not unprovoked and naked aggression. This argument conforms with our observations that when China is relatively weak (as China is today, being a rising power), the Sunzi paradigm prevails; it is also consistent with China's traumatic experience dealing with external powers during the *Shame and Humiliation Century*, whereby military might had been the language of the fittest. The Sunzi paradigm is likely to remain predominant in contemporary Chinese strategic thinking in the foreseeable future for as long as the relative strength remains in favour with the *status-quo* powers, and the Chinese continue to perceive themselves as being treated unfairly.

One may, however, wish to take heart of a discernible trend that, since the late 80s, the Confucian-Mencian paradigm is gradually gaining influence on the Chinese decision-makers.29 China's restraint towards the 1996 Diaoyu Islands crisis is a case in point. Among other explanations, it is consistent with China's growing strengths relative to the status-quo powers, thus giving rise to the corresponding ascendancy of the Confucian-Mencian paradigm. It seems that at this time in the post-Cold War, the Confucian-Mencian paradigm is approaching an equilibrium with the Sunzi paradigm in their influence on Chinese security policy, which is best illustrated by the recent Taiwan Strait and Mischief Reef crises. While one can clearly detect a dominant streak of the Sunzi paradigm, the Confucian-Mencian paradigm had apparently worked towards preventing China from resorting to force in both cases, probably for reason of not wanting to excessively jeopardise the regional stability. Otherwise, China would at least have shelled Kinmen and Matsu, as in 1958; and taught Philippines "lessons" as in the 1988 showdown with Vietnam over the Spratlys.

To look for the factors that would tilt the relative dominance between the Confucian-Mencian and Sunzi paradigms in contemporary Chinese strategic thinking, ironically, we need to turn the structural and non-cultural variables; and herein lies the limitation of the strategic culture analysis. Although this paper does not purport to delve into details, it should be highlighted that, as strategic culture possesses an iterative

dynamics responding to feedback from external forces, the importance of a hospitable strategic environment, conducive to the ascendancy of the Confucian-Mencian paradigm, cannot be over-emphasised. The world should not be taken hostage by the notion of inevitable conflict between the status quo and rising powers. Among other factors, the British attitude towards the Americans in the immediate post-World War years for whatever the reasons, contributed to the relatively smooth handing-over of "mantle" between them. This shows that the post-Cold War world is not predestined to witness a final showdown between the US and China. In this regard, although this paper is not about to suggest appeasing China, the "containment" policy is certainly a self-fulfilling prophesy, doomed to provoke a hostile China as it reinforces the relative dominance of the Sunzi paradigm in the Chinese strategic culture. The "constructive engagement" policy, backed by credible deterrence on the other hand, seems to promise the most favourable outcome of an amiable and responsible China as it provides incentive to the Confucian-Mencian paradigm, while at the same, a disincentive to the Sunzi paradigm.

Conclusion

As the discussion thus far should suggest, whether China is predisposed to using force, is reflective of the relative dominance between the Confucian-Mencian and Sunzi paradigms in Chinese strategic culture. This relationship between China's strategic culture and its predisposition to using force is however, more by correlation than casual.30 One should therefore, not be deluded into believing that strategic culture alone can be a self-sufficient predictive tool for policy-makers. Nevertheless, if analysing the structural and non-cultural variables were analogous to putting oneself into the subject's shoe, then studying his strategic culture would be to put on his hat.

If history is any guide, the Confucian-Mencian paradigm will manifest itself in Chinese security policy when China is strong and prosperous. Otherwise, the Sunzi paradigm prevails. Presently, the relative dominance of the Sunzi paradigm, at least at the policy level, underscores China's predisposition to using force. To ensure an amiable and responsible China, the Confucian-Mencian paradigm in Chinese strategic culture needs to be encouraged, and the Sunzi paradigm subdued, however, therein lies an inherent contradiction. While the Confucian-Mencian paradigm predisposes the use of peaceful means, its corresponding moral-hierarchical worldview is unlikely to be acceptable to most states. On the other hand, the tendency to use force prescribed by the Sunzi paradigm has a corresponding worldview of China-among-equals, not unlike that of the prevailing Westphalian system of states. This inherent contradiction in Chinese strategic culture probably accounts for the ostensible inconsistency and ambivalence of Chinese security policy in the post-Cold War era. While it is beyond the scope of this paper to discuss, suffice to say that China is in need of re-rationalising its strategic culture.

Endnotes

1. See Gerald Segal, *China Changes Shape: Regionalism and Foreign Policy,* Adelphi Paper No. 287 (London International Institute of Strategic Studies, 1994): David Shambaugh," Growing Strong: China's Challenge to Asian Security", Survival, Vol. 36 No. 2 Summer 1994, pp 43-59; Barry Buzan and Gerald Segal, "Rethinking East Asian Security" Survival Vol 36 No. 2 Summer 1994, pp 3-21; and Denny Roy, "Hegemon on the Horizon? China's Threat to the East Asian Security", *International Security* Vol. 19 No. 1 Summer 1994, pp 149-168.

2. For main arguments against the Chinese threat, see Denny Roy, "The Chinese Theat Issue: Major Arguments",*Asian Survey,* Vol. 1 XXXVI No. 8 Aug 1996, pp 758- 771.

3. David Shambaugh, "Containment or Engagement of China? Calculating Beijing's Responses", *International Security*, Vol. 12 No. 2 Fall 1996, pp 758-771.

4. Ibid, pp188-196. David Shambaugh has highlighted three sets of domestic problems faced by China, namely succession politics, system fragility and devolution of central control.

5. Denny Roy groups the arguments advanced for or against the Chinese threat into two categories, namely the "soft" arguments which concern the intentions of the Chinese and their adversaries, and "hard" arguments, which downplay the significance of intentions, dealing instead with capabilities or anticipated or

unintended consequences. Roy further argues that "soft arguments consist of system-level considerations, which include domestic politics, history, culture and ideology. See Roy, "The China Threat Issue", pp 765-770.

6. See Alastair Iain Johnston, *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History,* Princeton University Press, New Jersey, 1995, pp 248-266 and Jing-dong Yuan, "Strategic Culture and Chinese Security Policy: Continuity and Change in the Post-Cold War Era", CANCAPS Bulletin, No. 11 Nov 1996

7. Johnston, *Cultural Realism*, p 107.

8. See Michael Howard, "The Causes of War" in Michael Howard, *The Causes of War and other essays*, Unwin Paperbacks, London, 1985, p 22.

9. Yitzhak Klein, "A Theory of Stategic Culture", *Comparative Strategy,* Vol. 10, No. 2, Jan-Mar 1991, pp 3-23.

10. *Ibid*

11. *Ibid*, p 5.

12. Johnston, *op cit*, pp 37-38.

13. *Ibid*, pp 22-27.

14. Alastair Iain Johnston, *op cit.*

15. Arthur Waldron, "Chinese Strategy from the Fourteenth to Seventeeth Centuries" in William Murray, Mac Gregor Knox and Alvin Bernstein, eds. *The Making of Strategy; Rulers, States and War*, pp 85-114.

16. *Ibid*,   pp   248-266.
17. See Michael H Hunt, *The Genesis of Chinese Communist Foreign Policy,* Columbia University Press, New York, 1996, pp 3-10 and Johnston, *Cultural Realism*, pp 248- 266.

18. Chih-yu Shih, *The Spirit of Chinese Foreign Policy: A Psychocultural View*, St Martin's Press, New York, 1990, pp38-61, 189-192

19. See John Fairbank, "Introduction: Varieties of the Chinese Military Experience", in Frank A Kierman Jr and John K Fairbank, eds. *Chinese Ways in Warfare,* Massachusetts: Harvard University Press, 1974, pp1-26.

20. Johnston, *op cit*.

21. Yuan, *op cit*.

22. Alastair Iain Johnston makes same observations in his case study on the Ming Dynasty, see Johnston, *op cit*, pp175-247.

23. Yuan, *op cit*.

24. Johnston, *op cit,* pp 248-266.

25. Yuan, *op cit*.

26. Johnston, *op cit*, pp 248-266.

27. Shih, *op cit*, pp 148-188.

28. *Ibid.*

29. Johnston, *op cit,* pp 248-266.

30. Yuan, *op cit.*

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15. Jing-dong Yuan, "Strategic Culture and Chinese Security Policy: Continuity and Change in the Post-Cold War Era", *CANCAPS Bulletin*, No.11, Nov 1996, pp 3-4.

16. Yitzhak Klein, "A Theory of Strategic Culture", *Comparative Strategy,* Vol. 10 No. 2, Jan -Mar 1991, pp 3-23.

17. Alastair Iain Johnston, "Think about Sstrategic Culture", *International Security*, Vol. 19 No.4, Spring 1995, pp 32-64

18. David Shambaugh, "Growing Strong: China's Challenge to Asian Security", *Survival,* Vol. 36 No. 2, Summer 1994, pp 43-59.

19. David Shambaugh, "China's Military: Real or Paper Tiger?", *The Washington Quarterly*, Vol. 19 No. 2, Spring 1996, pp. 19-36.

20. David Shambaugh, "Containment or Engagement of China? Calculating Beijing's Responses", *International Security,* Vol.12 No.2, Fall 1996, pp 180-209.

21. Barry Buzan and Gerald Segal, "Rethinking East Asian Security", *Survival*, Vol. 36 No. 2, Summer 1994, pp 3-21.

22. Denny Roy, "Hegemon on the Horizon? China's Threat to East Asian Security", *International Security*, Vol. 19 No. 1, Summer 1994, pp 149-168.

23. Denny Roy, "China's Threat Environment" *Security Dialogue*, Vol. 27(4), 1996, pp 437-448

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