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0120001005

Australian Army History Unit

16 July 2014



ARMY JOURNAL

No. 266 JULY 1971

ARMY JOURNAL

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Printed and published for the Australian Army by The Ruskin Press Pty. Ltd., and issued through Base Ordnance Depots on the scale of one per officer, officer of cadets, and cadet under officers.

Contributions, which should be addressed to the Editor, Army Journal, Directorate of Military Training, Army Headquarters Canberra, A.C.T. 2600, are invited from all ranks of the Army, Cadet Corps and Reserve of Officers.

\$10 will be paid to the author of the best article published in each issue. In addition, annual prizes of \$60 and \$20 respectively will be awarded to the authors gaining first and second places in the year.

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COVER: Detail from 'The Mad Mile', Jezzine, Syria, July 1941, by Sir William Dargie. At the Australian War Memorial.

ARMY JOURNAL

A periodical review of military literature

No. 266, JULY 1971

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(Australian War Memorial)



Major J. L. L'Epagniol
Australian Intelligence Corps

Introduction

COMMUNIST revolutionary warfare is fought by political, psychological, economic and military means; it is therefore obvious that victory cannot be achieved against the communists by military means alone. If their military forces are victorious the communists will achieve their aims; however, if they are defeated in battle they will still be capable of achieving victory by the remaining means. While they employ

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guerilla tactics and strategy they are not dependent on them to reach a decision.

In this paper it is proposed to show that in a revolutionary war the communists will never be defeated unless the political infrastructure which directs and supports their military units is first destroyed.

Background

Revolutionary warfare is the communist's blueprint for control of the underdeveloped nations of Asia. They have attempted to raise the techniques which they developed against the Nationalist Chinese and the French to a science so as to be able to prescribe a formula which, if applied according to directions, will yield inevitable victory. Its fool-proof label makes it attractive to dissidents everywhere and at the same time makes destroying the fiction of its infallibility a prime task for nations interested in peace, and in helping other nations develop along orderly, constructive lines.

The primary weapon is the subversive, political, underground organization which is usually referred to as the infrastructure. This infrastructure is always established in the targeted nation with great care and thoroughness during the preparatory phase of the war and is responsible for creating the base for the military forces. Without this base it would not be possible for the forces to operate. If the base is permitted to develop and expand unopposed the need for strong military forces later will diminish. The infrastructure will eventually reach the stage where it will be able to gain, through 'front' organizations, significant international recognition as the only true representative government of that nation.

Political aims are always dominant and military operations are designed to support them. The infrastructure provides the means to maintain and control their military forces while simultaneously conducting the important political, economic and psychological aspects of the war. It gives the communists the ability to oppose the aspirations of the people while appearing to further them; to manipulate individuals by persuading them to manipulate themselves.

President J. F. Kennedy in a speech before a joint session of the United States House of Representatives and the Senate on 25 May 1961 was first to acknowledge the existence of an underground organization in South Vietnam when he said:

Their aggression is more often concealed than open But where fighting is required it is usually done by others, by guerillas striking at night, by assassins striking alone, assassins who have taken the lives of 4,000 civil officers in the past twelve months in Vietnam, by subversives and insurrectionists who in some cases control whole areas inside independent nations.¹

Our objective in South Vietnam has been the destruction of enemy military units because, militarily, they present the only attractive targets. The result has been operations, often based on meagre intelligence, to seek out and destroy these units. Communist units are organized to cope with *exactly* this form of action. They are seldom concentrated, except for action on their own initiative, and are scattered over wide areas of jungle and other inaccessible terrain. If our forces make contact the action is immediately broken off by the enemy. In the rare case where a unit is surrounded and suffers heavy casualties as a result, no permanent damage is inflicted. As soon as our operation is over and our units leave the area, the infrastructure goes to work again and within a short period the losses have been made good. This has been the pattern of activity throughout the Vietnam war. Our sole aim has appeared to be the destruction of Viet Cong units and, as the progress of such a war can be measured only statistically, we have employed statistics to prove that our operations have been successful and effective.

THE STRATEGY OF REVOLUTION

**Either the East wind prevails over the West wind
or the West wind prevails over the East wind.**

—Old Chinese saying.

In communist theory the world revolution can be carried out by employing three general strategies. In any given situation the communists may choose from: the United Front from Below (Front) Strategy; Right Strategy and, Left Strategy. The first of these is also known as the 'Four Class' or 'War of National Liberation' strategy. In this paper the term 'Front Strategy' will be used as it implies a greater emphasis on political organization. The communists are able to switch from one to another as circumstances change and therefore it is important to understand the essential differences between them.

Front strategy was employed during the campaign against the French in Indo-China and is currently being employed in South Vietnam

¹ Pike, Douglas, *Viet Cong*. Massachusetts, M.I.T. Press, 1967, p. 33.

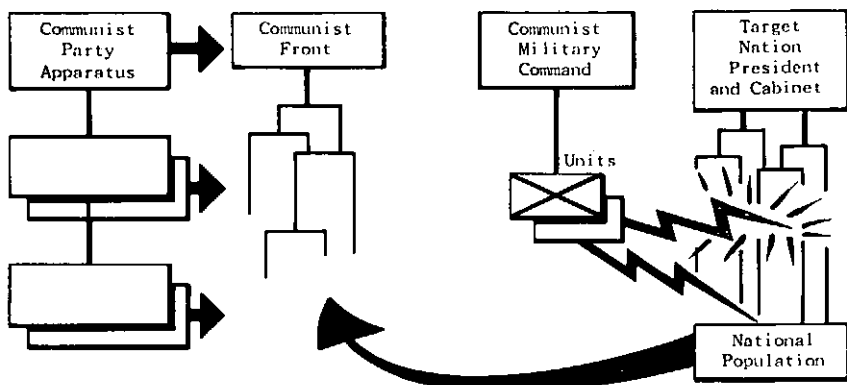


Figure 1

as well as in Cambodia.² It employs three crucially important, parallel, structures and is illustrated in the simplified diagram in Figure 1.

In Figure 1 the national executive is represented at the head of the right hand column. Beneath it is the administrative structure necessary to conduct the government's business in administering the nation. Parallel to this structure the communists establish a 'front' which is led by professional subversives who, although often sheltered from public view, make the front's public pronouncements. Its mission is to persuade the population to act as though the front was the real government. It is presumed by the communists that if they persist long enough sufficient people will act as though the front *is* indeed the real government. By this process the government is not destroyed — it merely becomes irrelevant! The military forces are employed to speed up the process by breaking the chain of communication between the government and the population and by exerting pressure on the people to re-orient their support towards the parallel 'shadow' government. The left hand column in Figure 1 represents the professional revolutionaries — the Communist Party. This remains unseen in the background until success is achieved. It organizes citizens into the front and provides leadership and direction.³ In South Vietnam this

² In Cambodia the communists appear to have switched from a form of Right strategy following the overthrow of Prince Sihanouk on 18 March 1970.

³ Conley, Michael C., *The Strategy of Communist Directed Insurgency and the Conduct of Counter-Insurgency*. US Naval War College Review, May 1969.

organization is represented by the National Front for the Liberation of South Vietnam (NFLSVN or NLF); the Viet Cong (VC) and the People's Revolutionary Party (PRP). In Cambodia we have witnessed recently the emergence of the Kampuchai National Liberation Front and the Khmer Liberation Army. The Communist Party has been well established in Cambodia for some years as it has also been in Laos where the front and the 'liberation army' are known as the Neo Lao Kak Sat and the Pathet Lao respectively.

Right strategy is employed when the political climate of a nation is suitable for the communists, and other leftist parties, to participate in the formation of a coalition government. This was the case in Laos prior to August 1963. After the coalition government has been formed a series of events is engineered by the communists, possibly over a number of years, to force the fragmentation of the smaller political parties. Ministers are forced to resign by compromise, terror and blackmail. Conflict is encouraged over who should fill the vacant posts and only those who are amenable to Party manipulation are accepted by the communists. Efforts are made to bring leaders of coalition parties into disrepute and opposition groups are encouraged to break away. Eventually there are only communists and their followers left. This victory is just as real as if it had been gained by a guerilla army. At this stage the final steps are taken — the liquidation of all opponents.

Left strategy is the least important of the strategies. The city is the battlefield and the warrior is the true believer who employs this strategy as an act of faith. He believes Karl Marx's theory of dialectical materialism and that communism is the wave of the future. He believes he need only go into the streets, declare the commencement of the revolution, and the masses will spontaneously rush to form columns of marching, selfless patriots who will throw themselves at the defences of the government. A more sophisticated approach is to employ genuine grievances to manipulate the population while the revolution is disguised as a 'peace' movement or freedom campaign. After a period of turmoil and possibly street fighting, power may be successfully seized. This strategy could be effective in nations which are better developed than those in Asia.

The remainder of this paper is devoted to Front strategy because it is this which concerns us militarily. South Vietnam is used as a case history but it is emphasised that the principles and practices which are discussed are applicable anywhere.

FRONT STRATEGY IN SOUTH VIETNAM

The most complete and happy victory is this; to compel one's enemy to give up his purpose, while suffering no harm oneself.

—Belisarius.

In mid-1956 President Ngo Dinh Diem was extending control in the rural areas of South Vietnam and it was obvious that the communists would not be able to contest any elections. President Diem was not going to conduct elections in accordance with the Geneva Agreements of 1954. In July 1956 the five to ten thousand *elite* cadres, whom Ho Chi Minh had left in the South, were mobilized to carry out the subversive requirements of the Front strategy. Since 1954 these cadres had continued to administer certain base areas, notably Nha Trang, the northern part of Tay Ninh province, Binh Dinh and Quang Ngai provinces, parts of Kien Phong and An Xuyen provinces and the highlands.⁴ By early 1957 the cream of village officialdom had been murdered. Assassinations, kidnappings and attacks on officials increased and by the beginning of 1960 two thousand officials had been kidnapped and one thousand seven hundred assassinated.⁵

The NLF was unveiled in December 1960. On paper a network of socio-political organizations was created and this structure was then quickly converted to reality. Within four years the NLF had reached, to some degree, almost every village in the country. Social pressure was brought to bear on the Vietnamese rural peasant to seduce him into voluntarily supporting the NLF — when logically support ought not to have been forthcoming. Eventually the NLF not only controlled the population but it had constructed an entire new social order at village level.

At this stage the communists had ruthlessly destroyed the government's link with the people at village level and had efficiently replaced it with an organization of their own which became known as the Viet Cong Infrastructure (VCI). Once the VCI had established control its purpose was to raise military units and, later, when the active phase of the war commenced, to provide these units with intelligence, recruits and supplies.

⁴ Tanham, George, *Communist Revolutionary Warfare*, Methuen and Co. Ltd., London, 1961, p. 116.

⁵ Tanham, *Communist Revolutionary Warfare*, p. 131.

It can be seen that the communist base for operations is the population. The parasitic infrastructure gives them the ability to feed on the same sources of supply as the government — competing with it in extracting their needs. Any nation's capacity to wage war depends on the strength of its home base and obviously in this case the side with the superior organization will get most of what it needs.

It is surprising to note that in South Vietnam, although a great deal had been known about the VCI for some years, it was not until December 1967 that a co-ordinated effort was directed against it.⁶ It took another year before this effort began to be effective. Perhaps the statistical approach to assessing the progress of the war had misled the nation's leaders into a false sense of confidence because in all this time operations had been directed against the so-called bases in the jungles. These bases were only operating bases, or camps, where recruits were trained and supplies stocked. The true base in the population was allowed to remain intact and losses were easily replaced. Perhaps this is one reason why the communists were able so effectively to prepare for the Tet offensive which burst on the country like a thunderclap some months later.

THE ORGANIZATION

**Successful guerilla action lies in careful preparations
and rapid and sudden attack . . . for the thunderclap
leaves no time to cover one's ears.**

—Mao Tsetung.

In South Vietnam the organization of the VCI is the standard employed in Front strategy and is shown in Figure 2. It is almost identical to that employed in Cambodia and Laos.

The People's Revolutionary Party (PRP), which is the southern branch of the North Vietnamese Labour Party (Dang Lao Dong), is the chief agency directing the Viet Cong in South Vietnam. It receives its orders from Hanoi through the Central Office for South Vietnam (COSVN). Branching horizontally from the PRP are the NLF and the VC which are controlled by the regional, provincial, district and village organizations. To strengthen PRP control Party members hold key

⁶ Vietnam Feature Service, *Operation Phung Hoang: Rooting out the Shadow Government*, Saigon, June 1968, p. 5.

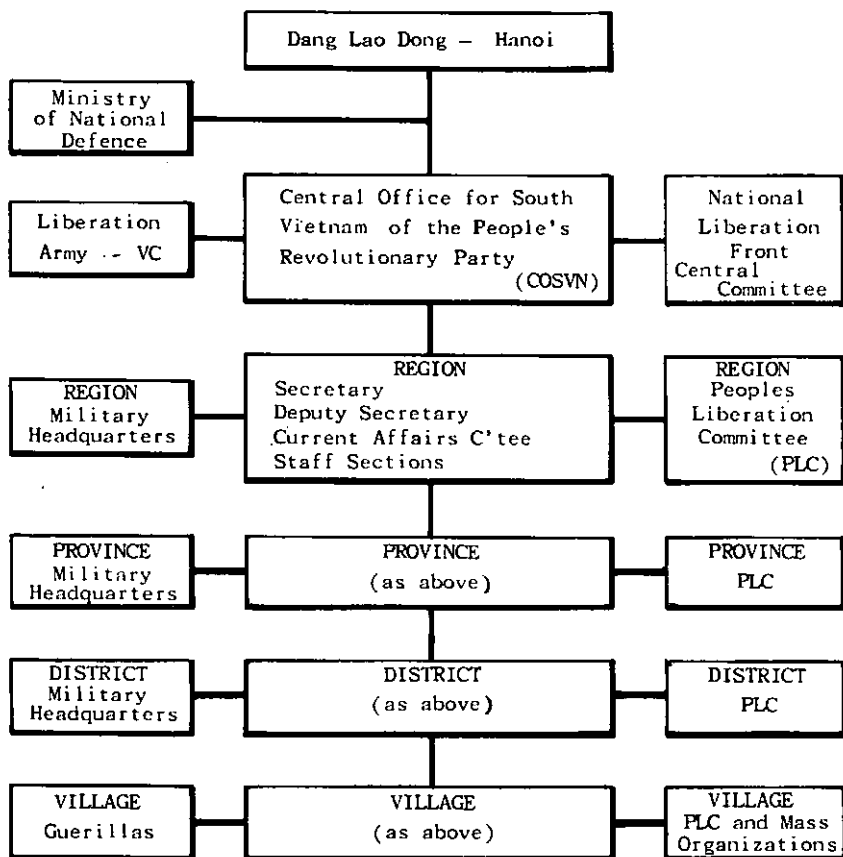


Figure 2

positions in all NLF and VC organizations. Of the NLF organizations the only significant action group is the Central Committee which makes overtures on an international scale on behalf of the NLF. The only other level where NLF organizations have effect is at the village where attempts are made to mobilize the people. In most villages there are Liberation Farmers' Associations, Liberation Women's Associations, Youth Associations, and others, which are controlled by the PLCs. To complete this structure the communists proclaimed the setting up of a Provisional Revolutionary Government of South Vietnam on 10 June 1969.

A TYPICAL PROVINCE PARTY STRUCTURE

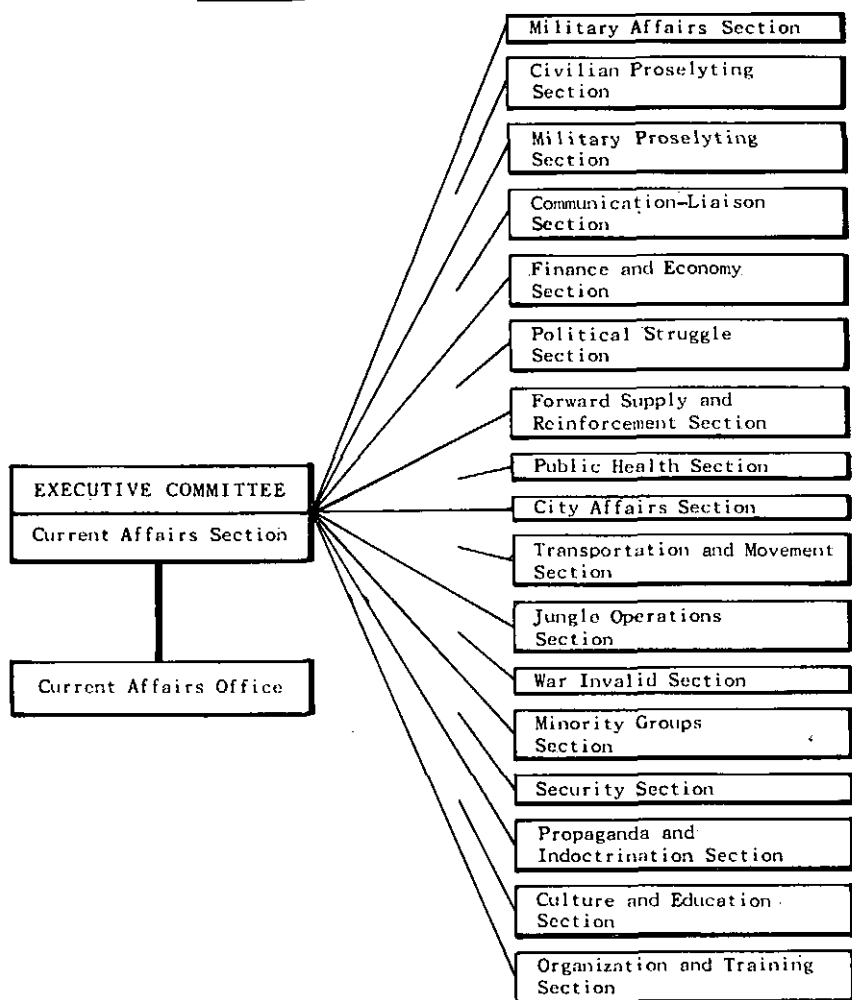


Figure 3

At each level, under the Party Secretary's control, there are a number of sections responsible for the daily activities of the Party. Figure 3 shows a typical provincial Party structure which gives an idea of the communists' areas of concern. Military units are controlled through the Military Affairs section. Mass organizations are controlled

through the Current Affairs section. At district level, and lower, many of these sections will be combined and at higher levels they will be broken down still further.

When this infrastructure is permitted to operate unhindered, as it was for so long in South Vietnam, communist authority is unquestioned by the population. The effectiveness of the VCI is clearly demonstrated in the following examples:

In Ba Xuyen province in 1968 the total annual rice crop was estimated as 600,000 tons. Of this, 400,000 tons was either consumed locally or sent through normal commercial channels to Saigon, while the VC got 200,000 tons, either in grain or sold for cash through the same commercial channels. This was perhaps one of ten similar provinces.⁷

Documents captured in Dat Do village, Phuoc Tuy province, in June 1969 indicated that up to that time the Long Dat District Committee (VCI) was able to provide the Provincial Headquarters with a monthly total of 54,000 kilograms of rice for distribution to regular forces for local consumption. This was an important source of supply for 274 VC Regiment and when it was cut off by Australian operations in the area the regiment was forced to move elsewhere.⁸

In December 1966 the VC ambushed two hundred trainees near Baria. The trainees were from a military training camp in Baria and had just completed firing on a rifle range. At the time of the ambush they had only blank ammunition and no radio — contrary to usual procedure — and were unable to defend themselves or call for help. Neither were there any security patrols to protect the trainees. US advisers had left minutes earlier and passed within feet of the waiting VC who were hidden in scrub. The VC knew the training schedule and an agent in Sector Headquarters (proved some time later) was able to arrange issue of blank ammunition and the absence of a radio.⁹

When the infrastructure is able to develop its support to the level it achieved in South Vietnam it has the capacity to wage war at a

⁷ Thompson, Sir Robert, *No Exit from Vietnam*. Chatto and Windus, London, 1969, p. 35.

⁸ Le Huu An, *Food Shortages in Long Dat and Xuyen Moc Districts*, VC Forward Supply Council, June 1969.

⁹ Tanham, *Communist Revolutionary Warfare*, p. 184.

sustained high tempo and to negate government efforts to win popular support. To reduce the scale of the war and bring it under control an understanding of infrastructure techniques is necessary by all concerned. Effective counter-measures can be based only on knowledge — not chance.

MODUS OPERANDI

Nine-tenths of tactics were certain enough to be teachable in schools; but the irrational tenth was like a kingfisher flashing across the pool and in it lay the test of Generals.

—T. E. Lawrence.

Experience in South Vietnam has taught us that as Party cadres gain power over a village they begin to regulate its life. Government papers such as family registers and identity cards may be destroyed, heavy taxes levied, government officials murdered and youths urged or forced to join the Liberation Youth Association. By the use of propaganda and indoctrination techniques new leaders are trained and youths of military age are conscripted into the local guerilla unit. Gradually as the organization gains more power all news media is controlled so that events are reported only from the Communist Party's point of view. Eventually all visitors to the village will be screened, 'spies' will be tried and executed and villagers will be obliged to house and feed communist troops as they move through the area. In addition to this the people will be forced to provide bearer services for supplies and women will be urged to participate in 'face-to-face' struggle — demonstrations against the government. It is difficult to imagine any free thought or free action being possible under such circumstances.

Once the infrastructure has been established PRP directives are issued to Regional, Provincial, District and village organizations by established communications and liaison (commo-liaison) routes. These routes are known only by the members of the commo-liaison sections and are rarely used for the movement of large bodies of troops.

Party directives are broken down at each level into further directives containing only the details applicable to the next subordinate organization. Each of these organizations receives only that information which concerns it and in this way security is assured. At district level the Party Secretary will be required to translate the directive into action. This may be in the form of district unit operations or the allotment of

IMPORTANT CADRES

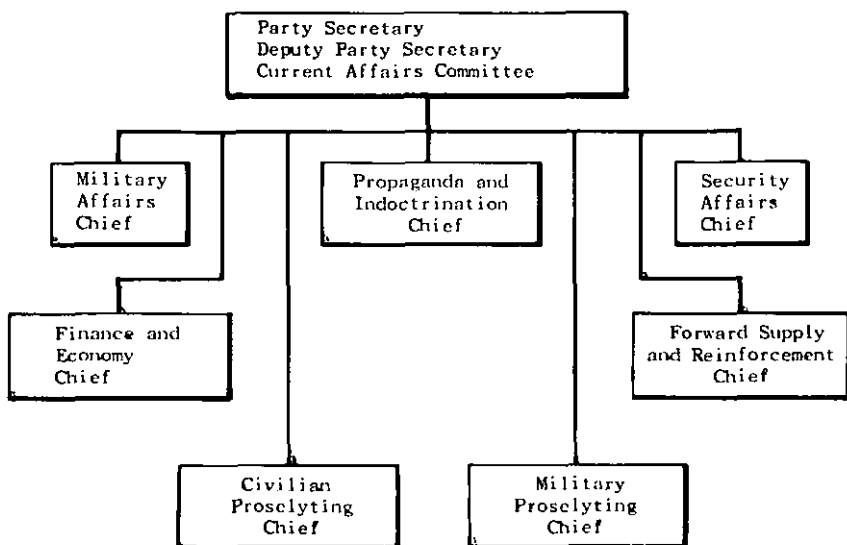


Figure 4

specific tasks and target dates to village committees. In this way a high level directive may be converted to countrywide action simultaneously and with an enviable degree of security.

The communists rely upon cadres¹⁰ to carry out their requirements. The cadre is the workhorse of the revolution and the incredibly heavy load which he is expected to carry is impressive. For example, in South Vietnam a recent Central Committee directive informed district cadres that during the following month they were to increase recruitment into the Liberation Army (VC) by twenty-five per cent; increase tax revenues in each district by 10 per cent; develop an intense 'hate America' campaign; eliminate all 'spies' and 'reactionaries' in their areas — and so on for seventeen items, any one of which would have occupied the full attention of a cadre for a month!¹¹

¹⁰ In common usage this term applies to individuals as well as to groups or units.

¹¹ Pike, Douglas, 'How Strong is the NLF?', *The New Yorker*, New York, January 1969.

Details of key cadres at all levels are shown in Figure 4. The elimination of these cadres should be given high priority.

Party Chapters¹² down to village level normally meet about once each month. In strong communist controlled areas these meetings will be at regularly scheduled dates. In weak areas the locations and frequency will vary for security reasons. A village Party Secretary will be required to submit a monthly report in time for the district Party Secretary's monthly meeting. This process of meetings and reports is repeated up the chain of command until, in the case of Vietnam, the COSVN report finally reaches Hanoi.

The Current Affairs committee, because it is the most important single committee, will always be located with the Party Secretary. This is the working committee which carries on the day-to-day operations and for this reason it must meet frequently. The Province Current Affairs committee has the power to approve or order military operations except in the case of major operations against key targets. If villages are being pacified piecemeal the Province Current Affairs committee will act on its own to destroy or disrupt the effort. This happened during the first quarter of 1969 in Phuoc Tuy province when Ngai Giao village became the centre of pacification activities. These activities received a favourable reception from the villagers, who assisted with the programme, and the VC had to take action to counter the obvious benefits which the government would obtain from it. VC action took the form of an attack by the Chau Duc District Unit supported by the Ngai Giao and Binh Ba village guerilla units. In the confused fighting that followed the village was virtually razed — as much by allied action as VC — and the VC propaganda which followed was able to capitalize on the result by blaming the government for the destruction.

In disputed areas committees will move from the villages into the jungle fringes for security reasons. Because they must maintain their hold over the people they will return to the village whenever possible and this will usually be at night. A number of supporters, agents and secret cadres will remain behind in the village at all times and they will usually have legitimate identity cards and occupations. For security reasons all members will have aliases, committee locations will change frequently, and no individual will know the identity or location of any person not concerned directly with his function.

¹² The Chapter consists of the Secretary and all Party members.

Province and district committees operating from base camps in the jungle will each be accessible to the next higher and lower echelon and within one day's march of each other. Below province, land communications will be by courier along established com-mo-liasion routes. From the province headquarters upward communication will usually be by radio and special courier.

Military forces support the infrastructure by giving protection and authority to their organization among the people. The infrastructure supports the military units by providing supplies, recruits and intelligence as well as the all important political control. Any weakness in one is balanced by strength in the other.

It can be seen that the communist infrastructure is the means by which all political and military activities are 'orchestrated' in order to secure the overall political aim. The system supporting military operations is shown diagrammatically in Figure 5. 'A' represents the infrastructure within the population which is responsible for subversion, sabotage, propaganda, intimidation and terror. It provides units at 'B',

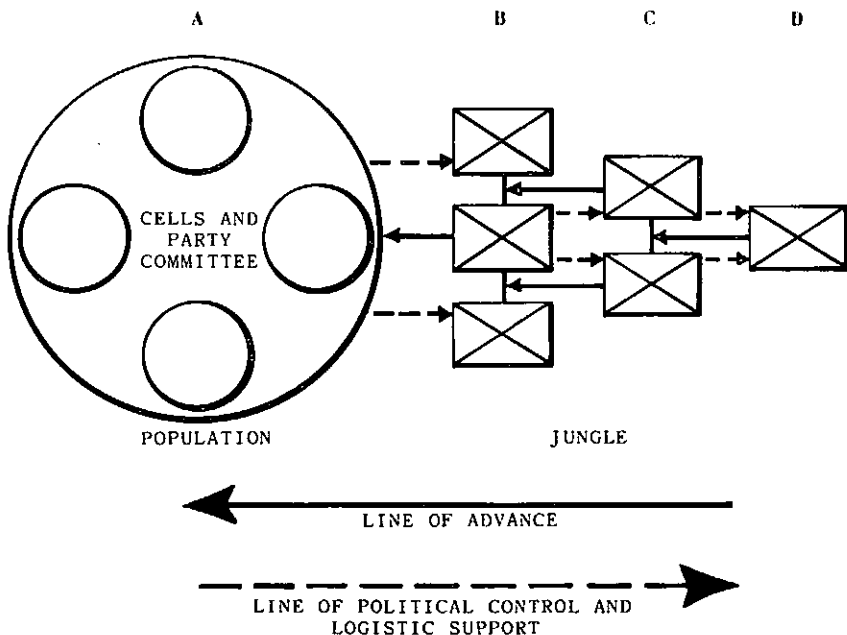


Figure 5

'C' and 'D' with recruits, intelligence and supplies. 'B' represents the village guerillas who may be in the village or on the outskirts. They give armed support to 'A'. 'C' represents the district and province units whose task is to support 'A' by attacks on government posts and by ambushes. It is also their task to prevent government forces from regaining control over the population in their areas. These units operate anywhere within the bounds of their own districts or provinces. 'D' represents the regular forces deployed in remoter areas where they can be safely trained and expanded. They are responsible for accelerating the advance of communist control by attacking regular government units. It is interesting to note from the diagram that the line of advance is the opposite to what it would be in conventional warfare. 'A' would be the home base, 'B' and 'C' the home defence forces and 'D' the expeditionary force at war.¹³

It appears obvious from the diagram that an effective step in breaking the influence of the infrastructure is to position forces between it and the military units. This will create a barrier through which movement in both directions must pass. This will not be possible without having to fight through the barrier and therefore both elements may be destroyed.

FIRST KNOW THE ENEMY — THEN KNOW YOURSELF

If you know the enemy and know yourself, you need not fear the result of a hundred battles. If you know yourself but not the enemy, for every victory you will suffer a defeat. If you know neither yourself nor the enemy, you are a fool and will meet defeat in every battle.

—Sun Tzu, 500 B.C.

An understanding of Front strategy, or 'wars of National Liberation' is difficult for 'western' non-communists to obtain without first acquiring a sound knowledge of communist political doctrine. In Australia few people have this understanding and this is probably a result of our habit of dividing the subject into separate compartments. Because of this the professional soldier confines himself to the military aspects while the politician confines his studies to the political and social

¹³ Thompson, *No Exit From Vietnam*, p. 32.

aspects of such a war. While each is an expert in his own field neither comprehends the subject as a whole. The military leader is expected to achieve victory by military means, while non-military action, being regarded as merely a consequence of the war, is conducted after military operations.

The communists regard the war as a *political* struggle with guns, not just a small scale war — a difference which is real and not semantic. Armed struggle is only that part of the iceberg above water and its purpose, among other things, before the onlooking world is to force the opponents to play the game according to the rules. Force opposed to the communists is condemned by the onlookers as terror, aggression or repression and as long as our counter to it emphasizes the use of military force, the communists will continue to exploit this weakness to isolate our army and government from the people. To know the enemy is to recognize that this is a struggle between two 'societies' which must be joined at the deepest levels of social life by military force where necessary.

In the first Vietnam war the French did not know the enemy and paid the inevitable price. At the start of the present war in Vietnam the world witnessed the spectacle of the United States organizing and training the South Vietnamese armed forces to fight a conventional, limited war of the Korea type. Few lessons had been learned from the French experiences in Indo-China or Algeria. This was a bad start but possibly worse was that the Americans did not understand the attitudes of their own people to the war.

The Tet offensive, and its results, demonstrated dramatically that the Viet Cong knew their enemy well but that the Americans did not know themselves well enough. The Americans regarded the offensive as a crushing military reverse for the enemy who left 50,000 dead on the battlefield, but in Hanoi it was hailed as an overwhelming psychological victory! The communists were able to exploit the emotional chain reaction in the United States in a manner which opened the way for them to diplomatic and political victory. Some writers consider that it ended the political career of President Johnson and drove the United States from Asia.¹⁴

¹⁴ Warner, Denis, 'The Turning Point of the War: Tet.' *Herald*, Melbourne, 30 January 1970.

In Australia we are probably less guilty than the Americans of not knowing ourselves sufficiently. Our government has attempted to gauge the attitude of the people and our various training publications contain many lessons learned from the Vietnam war. In 'knowing ourselves' we have done well but in the process have neglected to 'know the enemy' well enough. Much of what we have learned from the Vietnam war about our communist enemy is confined to the minor tactical level and there are very few, if any, authoritative articles concerning the communist infrastructure available for the professional army officer's education. Many officers have returned to Australia after a year in Vietnam knowing little of the VCI.

In our training for future wars of this type we must establish principles which can be used as a framework on which to base our future political, social, psychological and military operations. Our military leaders in future wars must know exactly what part military operations play in the overall communist plan and just where their own operations fit into the government's counter to it. They must have a good understanding of the communist infrastructure's method and must understand the need to co-ordinate their operations with those conducted by the civil or military government in their area.

Our military training manuals do not sufficiently emphasize communist weaknesses which can be exploited at all levels and yet this is where great emphasis must be placed if our operations are to be successful.

If we examine the communist military philosophy of the 'Unity of Opposites' and apply it to the three generally accepted phases of a 'Revolutionary' war we will see where the weaknesses may lie. 'In each advantage lies the seed of disadvantage' said the ancient philosopher Sun Tzu 'and it is only the wise general who is able to recognize this fact and turn it to good account.'

In the first phase of the war communist organizational efforts among the important ethnic and religious groups are not as successful as is usually thought. The social changes brought to the 'liberated' areas are often more apparent than real. In Vietnam the NLF liberation associations, for example, are more manipulated than participational and such an arrangement carries with it the seeds of its own doom.¹⁵

¹⁵ Pike, *Viet Cong*, p. 382.

In the critical second phase allied forces are likely to be requested to assist the government. In this phase the communist strength lies in the control of the population and this is where the weakness also lies. Once control is disputed or destroyed the initiative is lost. This phase is covered in more detail later in this paper.

During the third and final phase there seems to be very little weakness to exploit and yet weakness does exist. Several times in the Vietnam war the communists have reached this stage and have been unable to capitalize on their apparent overwhelming advantage. For some years they have had problems concerning this phase.

Two doctrinal problems have plagued the NLF during the entire period. One concerned the propriety or efficacy of terror. The other dealt with the ultimate role of the armed struggle. . . . How should the *Giap* third-stage thesis in the drive to power be climaxed? . . . The great debate was over how to win. The NLF faced three choices in writing the last act of the drama: the military ending; the social ending or general uprising; and, the political — infiltration and takeover ending, or the negotiated settlement.¹⁶

In South Vietnam the problem concerning the use of terror has not yet been resolved. Its use has some obvious advantages and disadvantages for the communists but if it is not used control will take longer to achieve and will not be so effective. The military ending was tried unsuccessfully in December 1963 and again in the spring of 1965. The general uprising failed in February 1968 and in 1970 attempts at a negotiated victory have, so far, resulted only in stalemate. Whatever the reasons for failure the third phase cannot be successful if the second phase has been successfully countered by the government.

THE COUNTER

**He who stumbles twice over the same stone deserves
to break his neck.**

—Spanish Proverb.

Communist control of the population on its own is not sufficient to gain victory because the infrastructure is not capable of acting alone to counter government operations against it. It is the military units which give it muscle — that is why they exist — but these units are themselves dependent on the infrastructure for their existence. The two organizations are interdependent. If the military units are destroyed the infrastructure will replace them but if the infrastructure is first attacked and

¹⁶ Pike, *Viet Cong*, p. 104.

isolated then the military losses cannot be replaced. The biggest mistake made by allied and government forces in the early years of the Vietnam war was that they could not resist attacking the more attractive target — the units — and the VC were able to expand the VCI and retain control of their base areas with impunity.

The infrastructure, being the heart of communist strategy, is the weak point at which allied operations must be directed. Well co-ordinated operations concentrated against it will force the enemy to fight for his 'popular' base which will then become the anvil of the battle and rob him of the initiative.

The first step in the counter is to separate the enemy units from the population. This is a military operation which involves the positioning of regular forces on the outskirts of population centres in such a way as to create a shield, or barrier, through which the communists must pass on their way to and from the population or units in the field. The communists will be forced to accept losses in their attempts to pass through the barrier and in order to remove the threat to their operations will have to concentrate their forces against it. Government regular forces at this stage must resist the temptation to chase communist units across the country-side in the hope of spectacular short term results. These units, instead, will be forced to come to them because they will be fighting for their very existence.

Once regular forces have been positioned, government local forces must operate, jointly with police field units, against the enemy guerillas behind the shield. At the same time the government must make it clear to the population that it is determined to win and has something better to offer the people than the enemy. These actions threaten the Communists from the start in their own element.

Getting government forces into the same element as the insurgent is rather like trying to deal with a tomcat in an alley. It is no good inserting a large, fierce dog. The dog may not find the tomcat; if he does the tomcat will escape up a tree; the dog will then chase the female cats in the alley. The answer is to put in a fiercer tomcat. The two cannot fail to meet because they are both in exactly the same element and have exactly the same purpose in life. The weaker will be eliminated.¹⁷

To achieve the security needed to implement its programmes the government must immediately commence eliminating the enemy supporters and agents among the population. This will require the co-

¹⁷ Thompson, Sir Robert, *Defeating Communist Insurgency*. London, Chatto and Windus, 1967, p. 119.

operation of all government agencies working with police under centralized control. The basic requirement is an efficient intelligence organization based on the police special branch. Where the police organization is weak, particularly at village and hamlet level, it is essential that the military intelligence organization assists the government. There should be no reluctance or hesitation about arresting enemy agents or supporters. When joint Australian—South Vietnamese operations were conducted on this pattern in Dat Do district, Phuoc Tuy province, in May 1969 results were immediately evident in captured enemy documents even though Australian participation did not become really significant for another month. The following extracts from such a document illustrate the plight of the VC at that time:

They are in standby positions and have been using Australian advisers (one to four) to command small units. They laid ambushes during the day and night. . . . They also destroyed civilian movements. They destroyed our installations in most of the district, kept the population in fixed areas and re-established government control in the hamlets and villages. The civilian self defence organizations have been more developed in the district. They have taken control of 29 hamlets, including types one and two, therefore they have isolated the guerillas causing them more difficulties and problems. . . . The revolution is not going according to plans. The worst aspect is the proselyting of the enemy troops. We must motivate the people in Dat Do to rise and combine with armed elements . . . in activities such as liaison, food supply, burying the dead and evacuating the wounded. They must allow children to join forces, contribute taxes (750 piastres every two months) and must protect the cadres living with them.¹⁸

The second step in the progression of civil/military operations is a development of the first. Regular units, acting on results of the joint intelligence effort, and in co-ordination with government local forces, must locate and destroy communist caches established between the population and the jungle bases. A high rate of patrol activity must be directed against the communist contact points and the commo-liaison routes. Intelligence efforts must be directed at locating and identifying key cadres and infrastructure members among the population as well as locating district and province level committees located in the jungle fringe areas. Destruction of district committees is important because this breaks the chain of political control between Region and Province Headquarters and the units. It also removes the element which can do most to reorganize the lower level committees probably still active among the population. In effect these operations tighten the noose created by the

¹⁸ Le Van Viet, *Long Dat District Headquarters Conference Report*. Phuoc Tuy Province, 8 May 1969.

barrier. The likelihood of enemy operations to break through the barrier will increase and so the kill ratio will also increase.

It is important in this stage that the police force is brought up to sufficient strength to be effective. It seems to be the accepted rule that a minimum police ratio of one per four hundred people is desirable. Government administrative organizations must be simultaneously expanded so that control measures can be imposed and the people encouraged to participate in government projects. Controls on movement and resources are mandatory and the most important of these measures are:

- Dusk to dawn curfews.
- An identity card system for all people over twelve years of age.
- Family books, including photos, to be held at each household and one copy held at Province Headquarters.
- Movement of bulk food supplies between villages and towns to be carried out in convoys.
- Snap checks on roads, tracks and rivers.
- Food, particularly rice, distributed on a ration basis.
- Canned goods punctured at time of sale.

As part of the battle to neutralize the infrastructure the government must interest the people in local politics. The individual needs to be provided with an organizational identity, inside a structure capable of engendering his loyalty, so that he has solid, selfish reasons as to why he should prefer the government side. This can be done by parcelling the population into political 'units' each with the means to voice its requirements through elected representatives. A local home guard should be recruited on a volunteer basis from among these groups to build a firm and effective commitment against the enemy. Such a programme was particularly effective in South Vietnam where, in Vinh Long Province, 100,000 of the 500,000 people were recruited into the People's Self Defence Force. This was more than was required but indicated that most families were involved in actively supporting the government.¹⁹ When the population is committed in this way the flow of intelligence on a volunteer basis increases and the results 'snowball'

¹⁹ Arnett, Peter and Faas, Horst, 'Vietcong Losing Grip on People.' *The Canberra Times*, 30 December 1969.

so that the infrastructure is more rapidly destroyed and there are no more volunteers to join the communist side.

When such a state of security has been achieved that the population in the area are able to live a relatively normal life without the fear of communist reprisals the third and final step can be taken by the government. Regular forces will now be able to move out into the remote areas to hit the enemy's mainforce units at their jungle bases. Losses inflicted on communist units will now be irreplaceable, food and other essential requirements will be in short supply and morale will be low. The government's civil resources can at the same time be directed to civic action programmes aimed at improving the standard of living. The programme should give priority to education, home building, public utilities and agriculture. The information services must be employed to inform the people that the benefits they receive are a reward and a consequence of security -- not a bribe.

Throughout the operations the government must exploit a basic weakness in communist propaganda. This is that the peasant does not understand the essence of what the communists attempt to put over:

The great emphasis on the communication of ideas failed to achieve its principal goal: the rural Vietnamese, lacking informational background, often failed to understand in context the meaning of the message. The rural Vietnamese knows little about the social forces loose in his country and even less about the outside world, and he greeted NLF efforts to remedy this deficiency with indifference -- the conditions of parochialism in which the next village is in the next world dies hard in Asia.²⁰

There has been no differentiation between foreign and indigenous regular forces in this paper because their purpose in the communist plan is the same. Where the local regular force is weak communist regular forces from a neighbouring country, if possible, will assist them in much the same way as allied forces will assist the government in Phase 2. The communists can be expected to employ a safe sanctuary in a neighbouring communist or neutral state as they have done throughout the Vietnam war. Although the size of these regular forces will influence the size of allied forces committed to support the government they will still be dependent on the infrastructure for political direction and control. If the government's attack on the infrastructure is successful these forces will be forced to revert to conventional warfare or withdraw to where they have come from.

²⁰ Pike, *Viet Cong*, p. 382.

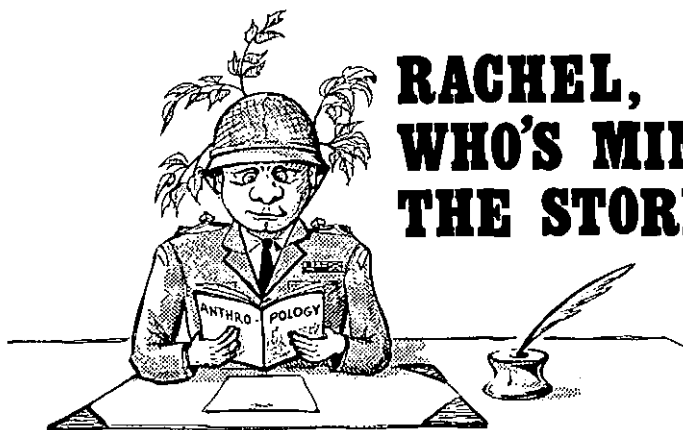
The three steps outlined are a variation of the three phases of revolutionary war (*The Enemy — 1964*) and have the same aim as the communists — control of the population. Step one is the passive phase, step two the active phase and step three the consolidation or counter offensive phase. The larger population centres should be secured first as the government 'base' then the villages and hamlets in the rural areas should be secured. Operations should be planned at the highest level and should not be too ambitious. A persistently methodical approach, which may seem slow, will encourage a steam-roller outlook and provide people with faith in ultimate victory. The government must not be diverted either by communist counter moves or critics on its own side who seek a quicker, simpler solution. There are no short cuts.

CONCLUSION

The strategy of revolutionary war is the process of displacing the legitimate civil authority. It is a political struggle, supported by force, and it is therefore a sound proposition that at the heart of counter revolutionary warfare doctrine must be the process of displacing the communist alternative political structure.

This study has concentrated on the organization and *modus operandi* of the infrastructure because a substantial contribution to the success of our future involvement in revolutionary wars can come from a thorough understanding of this organization. The whole problem of the meaning of war, in this context, needs to be re-examined and account taken of the fact that parallel political hierarchies are here to stay.

To destroy the infrastructure communist military units must be isolated from the population. When the infrastructure has been neutralized or destroyed control of the population can be wrested from the communists. Military action in support of the government must be co-ordinated with the civil operations and no matter what else occurs priority must be given to the destruction of the infrastructure. Failure to recognize this fact will almost certainly end in defeat, or stalemate, and to win military battles but lose the political struggle may increasingly become the unsatisfactory conclusion of a revolutionary war. □



RACHEL, WHO'S MINDING THE STORE ?

Lieutenant Colonels D. M. Butler DSO and B. C. Milligan

Introduction

THIS essay, as befits its origins in those conversational diversions which occur between fluffed drives and muffed putts, is philosophical in character. It is meant to serve, and to be critically regarded, as a thematic sketch rather than as a blueprint based on rigorous research, though some objective evidence is used to support its main arguments. It attempts to provide a framework for thinking about the functions of education, especially as they relate to some unrequited educational needs of the present Staff Corps of the Australian Regular Army. Though it arose from spontaneous reflections whilst following the sun, this essay contains little that is entirely new under the sun. Many of the sentiments it contains have been expressed before, by various authors and in various contexts. Our principal point of

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departure is the attempt to integrate these sentiments within the framework of a general and sustained rationale.

It may help to stress at the outset that the values espoused in this essay are in no way intended to deny the need for, nor to denigrate the present quality of, those aspects of the Staff Corps Officer's education which are expressly military in nature, and which are handled by military schools and courses. Rather, the educational needs which are the major focus of this essay are seen as being complementary to, and compatible with, this military education.

Finally, in the belief that principle subsumes practice, and that practical means can always be found to implement sound principles, no attempt is made to analyse or prescribe the means which might be used to give our theme the name of action. However, it will be shown that the present provisions for the general education of the Staff Corps officer are insufficient to satisfy the kind of need with which we are most concerned.

The Functions of Education

The most basic and general function of education is to provide for the maintenance of society, that is, for its survival and its growth. And if this is true of the function of education in respect of society as a whole, it applies also to the function of education within any single social organization such as the military.

To satisfy this basic function the educational process aims to prepare people for the performance of specialized roles in the occupational structure of the society (or the organization), and it aims also to produce socially constructive and broadly informed individuals, imbued with the basic values of the society and capable of expressing their creative individuality. In the former sense, education serves an instrumental purpose — it tends to be regarded as a means to an end, and to be seen as necessarily technical and specialized in character. In the latter sense, education serves an expressive purpose, both in respect of the culture, and of the individual's own potential — it may be perceived as an end in itself, and it tends to be general or liberal in emphasis.

In respect of the instrumental aims of education, a rational philosophy would be to educate people to the minimum extent which is consistent with the technical demands of their particular occupation. In general, military education within this country (and possibly only within

this country) has been constrained to adopt this as a sole aim. The stated aim of most courses conducted in Service schools reflects the instrumental approach, and all provisions made under the Civil Schooling Scheme are required to be justified explicitly on this basis. In respect of the expressive aims of education, a rational philosophy would be to educate people to the limits of their individual capacities to learn, and to allow them a relatively unrestricted choice in what they learn. (The expressive purpose is as well served by courses in archeology or philology as it is by courses in politics or modern history).

Although the latter ideal has never, for socio-economic reasons, been attained in the educational practices of Australian society, it is certain that, among all work institutions in this country, the military has been constrained to approximate it least. Notwithstanding the favourable intellectual standard of its officers, relative to civilian executives, the military contains what appears to be the lowest proportion of tertiary qualified individuals among the 'managerial class' in both private and public sectors of employment. At the workaday level there is typically an 'educational gap', in favour of the latter, between the military author of an Army proposal and its civilian assessor. And although educational superiority does not always and necessarily imply intellectual superiority, Sir Henry Bland¹ has adumbrated the manner in which the educational gap is liable subtly to be converted into a credibility gap, with all of its implications for the outcome of the decision process. Noting that 'the number of Staff Officers with degrees is depressingly low', Bland enlarges on the need to produce, 'for the upper echelons of defence administration, military men capable of making a full and effective contribution to matters of major defence policy, if the shift in the balance of influence to the civilian side . . . is to be arrested'. And neither Bland nor ourselves intend any reflection on the individual talents of our senior military men. As comparisons we present below suggest, the problem of relative influence is a structural and a collective one, not a personal one.

Moreover, within the military's low proportion of tertiary qualified officers, technical rather than 'liberal' qualifications predominate. It is recognized that this situation is symptomatic of the technological age, but it is noteworthy that the balance in favour of the 'generalist' and

¹ 'Some aspects of Defence Administration in Australia.' The twenty-first Roy Milne Lecture, 1970.

broadly well educated man has been explicitly reinstated in the concept and operation of the Second Division of the Commonwealth Public Service.

The Social Significance of Education

It is a sociological truism that education is a powerful determinant of perceived and awarded status, both in respect of the individual and the group. Just as more social status accrues to the highly educated individual, so also is more status accorded to occupational groups and organizations which contain a relatively large proportion of highly educated members. Moreover, as Bland has also implied, it is its perceived status rather than its material rewards *per se* which is the index of an Army's capacity to attract recruits of the desired quality, material considerations such as pay and conditions of service being more relevant to 'internal recruitment' in the form of retention of highly trained manpower.

The generally low ranking of military officers in the Australian scale of social stratification — in Congalton's study,² an Army captain ranks below a trained nurse, a dairy farmer and a physiotherapist — seems basically attributable to the fact that the Army is perceived as being a group with no noticeable propensity for containing or attracting well educated men. (Those well educated men we do have are largely unnoticeable to the general community because, more so than in other organizations, they are denied the opportunity for titular public expression). In general, the educated community appears to hold an image of the Army as an insular, unself-critical and illiberal institution whose intellectual preoccupations are trivial and whose education (training) is confined to the most narrow, technical and esoteric fields. In terms of social status, and consequently in terms also of the ability to attract quality recruits, the instrumental education which predominates in the military cuts little ice, and there is commonly a tendency to doubt the Army's need or capacity to employ 'technical' graduates to a fully professional extent.

It is axiomatic that to be — and to be seen to be — a valid and viable organization, an Army must be broadly representative of its own national population. Whilst no modern technological Army can accept recruits from the illiterate and innumerate elements of the population

² *Status and Prestige in Australia*. Cheshire, 1969.

— and to that extent it cannot be completely representative — the Australian Army is also significantly under-represented at the higher levels of education. It is relevant, in the light of the structural and functional nexus which exists between them, to compare the educational standings of the Army and the Commonwealth Public Service.

For purposes of the comparison which follows, professional groups (engineers, scientists, doctors, etc.) within the Third Division of the Commonwealth Public Service, and technical groups (Signals, Engineers) within the Staff Corps have been excluded.³ In the remaining component of the Third Division of the Commonwealth Public Service the proportion of University graduates is 8%. In the remaining component of the Army Staff Corps up to and including the rank of Colonel — a range commensurate with that of the Third Division — the proportion of university graduates is presently less than 1%. When the entire Second Division of the Commonwealth Public Service is compared with the entire Army General Staff, which embraces the commensurate range of Brigadier and above, the respective proportions are 66% and 14%.⁴

The introduction of degree courses at the Royal Military College will go some way, in time, towards redressing these imbalances, but RMC under normal circumstances contributes only about 30% of the annual intake of regular Staff Corps officers. Moreover a majority of its graduates will emerge from the faculties of Science and Engineering, an 'instrumental' proportion far higher than that which obtains in Australian universities generally. It is pertinent also that the first generation of university graduates from RMC will not begin to assume higher command and executive appointments for another twenty years. There is, then, a whole 'middle' generation of officers who will require assisted access to higher education, if the above discrepancies are to be reduced, and the managerial performance of the Army to be seen to improve.

Professor Karmel who has just been appointed Chairman of the Australian Universities' Commission — and who may therefore be in the happy position of being able to aid and abet the fulfilment of his own prophecy — has estimated that, by the end of the 1970s, it will be

³ Lay readers are advised that the Staff Corps of the Australian Regular Army excludes such groups as doctors, lawyers, educators etc.

⁴ Sources: Public Service Board Annual Report 1969, and Army records. Note that because of the 'generalist' character and function of the Second Division and General Staff, no exclusion of professional or technical sub-groups within them has been made.

usual for one third of each generation of Australian males to enrol for tertiary education.⁵ If it is assumed, for convenience, that mental ability will be the sole determinant of enrolment, this would mean that male tertiary students will then be drawn from the top 33% of the intellectual distribution of the male population. (This is in fact a conservative estimate, since ability is never, in practice, the sole determinant. Many of the brighter, but unambitious or disadvantaged, members of this upper group will forfeit their tertiary places to others drawn from further down the intellectual scale). The Army does use a direct intellectual criterion for appointment to commissioned rank, and 95% of its male officers are drawn from the top 16% of the intellectual distribution of the Australian male population. The entire Army male officer corps is drawn from the top 20% of this distribution.

Of those civilian students who do enrol for tertiary education, Australian experience suggests that something like 60% (or 20% of each male generation) will ultimately obtain a tertiary qualification. Even, therefore, when the point in time is reached at which RMC university graduates will constitute a steady proportion within each officer rank, the Regular Army will remain massively skewed in the direction of educational inferiority relative to the proportion of tertiary qualified people in the general community, and the Staff Corps will remain massively under-educated in relation to its collective intellectual potential. Merely to attain an educational parity which is based on academic potential and on the projections cited above would require that *all* Staff Corps officers be educated to obtain some form of tertiary qualification. It is certain that the intellectual quality of Army officers will remain thoroughly representative of that of the 'managerial class' in the community, but, because education is a direct and visible index of status and intelligence is not, the Army can expect to continue to be lowly regarded until such time as the academic potential of its members is more substantially exploited.

Intrinsic Educational Needs

Much of the foregoing has been concerned with the comparative educational standing of the Army relative to various external reference groups in the community. There exists also a strong internal demand, stemming from role requirements in and of modern armies, for a more

⁵ In Wheelwright E. L. (ed) *Higher Education in Australia*. Cheshire 1965, p. 68.

highly educated officer corps. Some of this demand is of a purely instrumental character — there is an obvious and undeniable need for engineers, computer programmers, technical staff officers, etc. to ensure the effective day to day operation of equipment, the provision of timely management information, and the availability of advice on matters of technical policy. But there is also a recognizable educational demand of a more general or 'liberal' nature. At the regimental level it resides in the problems of leadership in modern armies which, against a background of comfortable indifference in the population at home, are charged with influencing men, many of whom may be non-volunteers, to accomplish tasks which are frequently dangerous and always discomfoting, and which arise in a variety of unusual places. Lieutenant-General Sir John Hackett has commented that the nature of the military leadership role is such as to 'make heavy demands on the young officer, who has to be made to remember that only a person of liberal mind is entitled to exercise coercion over others in a society of free men.'

Modern warfare rages in the minds of men as much as on the conventional battlefield; its goal is the command of a people's loyalty rather than of a piece of territory; it is fought by psycho-political weapons as much as by military ordnance. Its successful pursuit demands of its principal actors subtlety, compassion and intelligent self-restraint as much as it demands the directed application of force and fire-power. Because it is waged across cultural barriers, and because it frequently involves a conflict between traditional and technological societies, it requires a constant and flexible effort on the part of commanders to stand in the other man's sandals, be he an intruded cadre, a local guerilla, a loyalist or a demoralized and uncommitted peasant farmer. It requires, additionally, the attainment and preservation of a dynamic balance in the use of the mix of forces available to commanders — arms, services, psychological operations, civic action and civil affairs. It would seem that this is the sort of situation which is most demanding of those Platonic qualities of mind which are seen as the virtues of a liberal education. Moreover, if the educational standard of military leaders at all levels does not keep pace with the standard in the community from which recruits are drawn, then, under all future conditions of mobilization whether partial or complete, a substantial minority of soldiers will be plainly and significantly better educated than their leaders.

⁶ *The Profession of Arms*. Times Publishing Company, 1962 p. 58.

At the policy level, the demand for a higher general level of education of military officers is reflected by the need to encompass and synthesise all of those requirements of modern warfare noted above. It inheres also in the need for planners and advisers whose credibility and judgement is most clearly and effectively vouchsafed by an educational standing commensurate with that of their civilian colleagues. And although the comparisons made earlier in this essay related only to first degrees, it is certain that once reasonable parity is achieved on that basis, its effective maintenance will require that a proportion of officers be sponsored to obtain higher degrees.

Present Access to Tertiary Education

The instrumental requirements of military education are in general satisfactorily provided by Service schools (especially in respect of those skills which tend to be peculiar to military needs), and by the current concept of Civil Schooling (in respect of those skills which are common to military and civilian needs, but which cannot economically be taught in Service schools). The 'particular' and 'specialized' criteria to be used in determining eligibility for civil schooling, and the technical nature of the courses and institutions subsumed by the scheme, represent a distinctly instrumental bias.

The avenues and opportunities for 'expressive' education are considerably more restricted and tend to be individualized, rather than being designed to meet a coherent military requirement. Apart from the trivia of etiquette-training, some more meaningful but random excursions into oenology, and the advent of the Arts stream at RMC, Service schools provide little education of a liberal kind. The Staff Corps officer who wishes to improve his general educational standing is normally obliged to seek part-time enrolment under the provisions of the Services Vocational and Educational Training Scheme. If he does so, it is in the certain knowledge that he will be unable to complete his chosen course without major interruptions, and in the probable knowledge that he will be forced at some stage to suspend his course, for service reasons. Further, a majority of Army members studying under this scheme is enrolled in correspondence courses. Those in this category study, for the most part, in splendid isolation; their capacity to make a mature and real contribution to the quality of campus life, both academic and extra-curricular, is not exercised, and the liberal appetites they do have are unlikely to be whetted by their roneod diet.

What they miss especially, and what is rarely provided in their workaday life, is the salutary and beneficial experience of having their 'world views' challenged and tested in the crucible of dialogues which make no concession to their military status and authority. The confidence born of these kinds of encounters is a powerful support in the discharge of a leader's varied roles and responsibilities.

Again, apart from the Arts course at RMC, some elements of instruction at Staff Colleges, and the requirements of two promotion subjects in an officer's lifetime — the effects of the last two resources being disjointed and piecemeal — no systematic means are exploited to infuse the ranks of the Staff Corps with a spread of objective insight into the political, social and economic affairs of the world of nations. And this is so notwithstanding the fact that it is in respect of these affairs that nations wage war and exact peace, that psychological warfare and operations, and civic action and civil affairs, are General Staff functions, and that armies which lack their fair share of these insights cannot expect to be fully effective instruments of national policy. It is expressive or liberal education — and it can be in any field which relates to the way men live — which, more than instrumental training, encourages the development of an enlightened curiosity, a conceptual awareness and a facility in communication which are the elements of effective performance of the managerial and leadership roles. In the final analysis, liberal education serves this very instrumental purpose.

Conclusion

It has been suggested in this essay that a Service need, and a psychological justification, exist for upgrading the general educational standing of the Staff Corps of the Australian Regular Army. Both the need and the justification are related on the one hand to the concept of parity with external reference groups, and on the other, to the intrinsic demands of the military role in the present age. Moreover, both the extrinsic and intrinsic considerations bear ultimately on the issue of the survival and growth of the military as a viable and representative national institution.

Beyond reflecting that the present facilities for the general education of the Staff Corps are inadequate to secure the sort of objectives we have outlined, no mere practical considerations have been allowed to daunt the development of our theme. (To extend the golfing allusion which began this essay, it is acknowledged that some readers will view the latter

statement as par for the course, in relation to at least one of the professions represented by the authors). Nor is it intended at this stage to constitute ourselves into a 'ways and means' committee. But some practical caveats bear mention. Officers cannot, and should not, be coerced to pursue the goal of higher education. For this reason — there are other reasons, but for this reason especially — we would not advocate that the holding of a civil tertiary qualification become a condition for promotion, even to the most senior ranks of the Army. After all, 33% of Second Division Officers of the Commonwealth Public Service apparently live on their untutored wits and on their informally accumulated wisdom. If this is the last country in the world which is prepared to perceive the difference between intellectual power and educational level in assessing an individual's worth, we believe it to be correct in its perception. But there remains an organizational need to redress or at least improve some unfavourable current trading balances in our educational levels. We are confident that sufficient officers to meet this organizational need would voluntarily undertake higher general education if they were given reasonable opportunity, assistance and encouragement to do so. (The Commonwealth Public Service Scheme of assistance, which embraces some full-time sponsorship, suggests itself as a useful model in these respects).

And now, briefly, to anticipate some criticism of the 'pie-in-the-sky' variety. (In this case the profession represented by the other author may be helpfully counter-active). Some readers are bound to say, and to do so charitably enough, that this stuff is alright in its place, but that it has nothing to do with the reality of the world of the infantry officer when he's eyeball to eyeball with an armed and angry man. It may also be claimed that the comparatively short lifetime of soldiering does not allow lost early educational opportunities to be regained. But by conservative reckoning an average of 10% of the post World War II infantry officer's service time has been spent in the operational role, or in immediate training for it. Moreover, the February 1970 issue of the American Army Journal *Infantry* reports (p. 11) that 'currently 77% of career officers in Infantry hold baccalaureate and 12% hold advanced degrees', and, as the text makes clear, these are qualifications gained at civil, not Service institutions. (To all of which a marginal retort has been penned: 'when the crunch comes, it is fighting ability *not* degrees that counts'. And fair enough too, in that context. But when the battleground shifts to the corridors of power, and issues fundamental

to our national survival arise, you can take it from Bland that the position is reversed). It is not suggested that the American figures should become the benchmark for the Australian Army Infantry, or Staff Corps. For reasons stated earlier, we would prefer to have standards derived from Australian reference groups, but the American data at least serve to suggest the feasibility of our general approach, even if it implies that some changes may be necessary to current career models.

Finally, those who have been sympathetic enough to our theme to wait until the last putt drops may see that what we have said contains the possibility of some negative as well as positive implications for the Army's survival. 'How are we going to keep them down on the farm after they've got PhDs?'. The truth is that we probably won't, unless the Kerr Committee performs unconscionable wonders, but they won't all leave, and those who do are still national, as distinct from parochial, assets. If the truth be told our erstwhile Rhodes Scholar, and our current spate of university honours graduates, whether they stay or leave, are probably as big a stimulus to quality recruiting and to our general standing as are our direct recruiting activities and our faceless PR ventures. □

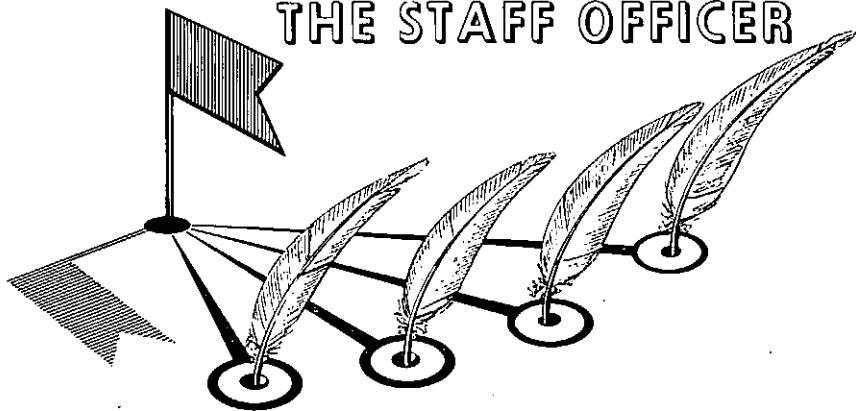
HAIG ON AUSTRALIAN DISCIPLINE

When the Duke of Connaught visited the Australian Corps on the Western Front during the First World War, he was, according to Lord Birdwood (*Khaki and Gown*, p. 309), 'full of questions and deeply interested in all I could tell him of the A.I.F. He told me that Sir Douglas Haig had been loud in his praise of our men, and recounted an interesting and significant conversation that he had had with the Commander-in-Chief. To the Duke's inquiry as to the discipline shown by the various troops, Haig, after a moment's thought, had replied, "Well, I consider the discipline of the Australian Corps as high as any."

'The Duke exclaimed, "You quite surprise me. I had heard that discipline among the Australians was bad."

'"That depends," said Haig, "on what you mean by discipline. I can only say this: that I have never yet called on the Australian Corps to undertake a difficult and hazardous operation—and I have often done so — without the operation in question being carried through with success, and always with good spirit and keen determination. From the top down to the most junior commanders, details have been most carefully worked out, and the plan executed with coolness and courage. And that is what I call discipline".'

THE STAFF OFFICER



*Wing Commander N. F. Ashworth
Royal Australian Air Force*

JANUARY 1970 saw the start of the first course of instruction at the newly established Joint Services Wing of the Australian Services Staff College. The Joint Wing is the first of a projected four wings, the other three covering the Navy, Army and Air Force respectively. When fully established the Australian Services Staff College will carry out all formal staff training for the Australian armed services.

The advent of this new phase in staff training in Australia marks a suitable point at which to discuss the role of the staff officer in military organization and, in particular, to examine the needs of staff training, both joint and single service.

The Staff Officer

While the range of jobs in a military organization designated as staff is great, covering the whole scale of officer ranks and every subject germane to military operations, certain generalities can be observed.

Wing Commander Ashworth, B.Econ, jssc, psc graduated from the RAAF College at Point Cook in December 1954. Since then he has served in a wide variety of command, staff and training posts, including staff appointments in Department of Air and Headquarters Operational Command and command of No. 10 Squadron RAAF at Townsville. He is presently a member of the Directing Staff at the Joint Services Wing, Australian Services Staff College.

Basically the staff officer is an assistant to a commander. Unaided, few commanders could cope with the often large number of subordinate units and complex range of problems facing them. In management parlance, they are limited in their span of control. Given the assistance of one or more staff officers this span of control can be greatly increased. Thus the staff officer gives his attention to a particular part of the commander's task, a part that is more nearly within the competence of one man to handle.

An important feature of the staff officer's job is that in relation to the units subordinate to the commander; the staff officer has no formal authority. He remains essentially an extension of the commander himself and can act only in the name of the commander. Thus the staff officer's task relates, irrespective of his own rank, to the level of concern of the commander.

The organizational unit within which the staff officer works is the commander's headquarters. Viewed from outside, the headquarters represents the commander. Its authority, and its responsibilities, are those of the commander, and it operates in his name. Internally, the headquarters is organized to give effect to the staff advice to the commander.

Synonymous with staff work is the written word. The weapon of the staff officer is the pen, not the sword. Somewhat irreverently the staff officer is called a 'pen pusher'. Despite the connotations of contempt from the practical fighting man, the term is substantially correct. In both the formulation of ideas and their communication to others the written word is paramount.

Another way of looking at the staff officer is to imagine him as both a filter and an originator of ideas. To enable the commander to devote his attention to the key decision-making aspects of his command, a great amount of detailed information must in fact be kept from him. It is here that the filter function of the staff officer comes into play. He selects, assesses and, if necessary, adds from his own intellectual processes to the information coming into the headquarters. Where the outside information lacks elements essential to the commander in reaching decisions, the shortfall must be made up by the staff.

Just as the filter action comes into play for information coming into the headquarters so the reverse process of expansion of detail is applied, where necessary, to the directives of the commander to his subordinate units.

Staff Training

Formal training for staff duties is a universal feature of military organizations. Further, the degree of uniformity in approach to such training is quite significant. Nowhere is the staff officer employed as a specialist in this type of work from the inception of his military career. Initial training and employment is directed towards the 'field' task whether as a fighting soldier or an administrator in some form of support function. Employment in the staff generally comes after the acquisition of experience 'in the field'. Thus the staff officer comes to the headquarters with a competence in some particular aspect of military operations.

The need to train the staff officer arises from the differences between the skills acquired 'in the field' and those required for a staff job. An examination of these differences, as well as pointing to the need for staff training, also serves as a basis upon which to examine the general form and content of the formal staff course.

Field and Staff

The task of the staff officer differs from that of the field officer to a marked degree. Each calls for different qualities. Success in the field does not of necessity imply suitability for staff work, and vice versa, despite the almost universal movement of career officers from field to staff and back again. The officer who has the qualities for both field and staff duties is the exception rather than the rule.

In the comparison of the field and staff task that follows, generalities only have been expounded. The exceptions have been largely ignored. In the field there are some jobs that equate closely to the staff task, while in every headquarters there are a number of jobs that are not strictly staff appointments. For this paper that somewhat mythical figure, the typical staff officer, has been placed in contrast to his equally hypothetical opposite number, the typical field officer. In the main the exceptions that can be found in practice to the generalities expounded here relate to the variations of a particular case from the typical. Furthermore, the main attention has been directed to the middle bracket of officer ranks (major to colonel equivalent). This bracket provides the bulk of the staff officers and is the area of attention in formal staff training.

Mention has already been made of the importance of the written word to the staff task. The written word is the main means of communication both externally, that is between the headquarters, subordinate units and superior formations, and internally. In the day to day task of the staff officer the file is all pervasive. This ubiquitous bundle of papers both initiates action and records the outcome. By contrast, in the field the written word, while it has its place particularly for communications 'up the line', is of far less importance. In the field verbal communications are primary.

The difference between the knowledge required by the field and staff officers, even within the same area, is twofold. First, there is the difference of kind. For the staff officer knowledge is of the 'understand' rather than 'be able to' kind. Secondly, there is the difference of level. The staff officer operates at a higher level in the command structure. Thus he tends to deal with the broader aspects of his particular speciality. He must also take account of a wider range of related problems, calling for a broader understanding of matters outside his particular speciality.

Clear and logical thinking is a requirement for success in the field as well as the staff. At the staff level, however, the problems are more complex and the implications potentially more far reaching. The staff officer, by virtue of his position in relation to the commander, is called upon to contribute to, and at times virtually make, decisions at levels well beyond his own rank. Also, the staff officer has greater scope for original thought. To a greater extent the field officer is guided by standard procedures, procedures that tend to originate from within the staff. Furthermore, the thought processes of the staff officer are thrown into sharper relief by his having to commit his thinking to paper, generally for the benefit of more senior and experienced persons. A staff officer in a key position who cannot think clearly and logically is more of a hindrance to his commander than a help.

The staff officer operates within a markedly different organizational environment to the field officer. A headquarters is unlike the field unit in that it is generally smaller, certainly in relation to the units under command; it has a high proportion of officers to other ranks and the file is its *modus operandi* rather than the spoken word. Within a headquarters, lateral communications are as important as those up and down the line, whereas in the field the vertical (superior/subordinate) relationship tends to predominate. Advice from below is much more readily given, and accepted, than in the field. Decisions from a headquarters

are much more likely to be an aggregate of many viewpoints and ideas, as compared to the field where the decision tends to be either the sole effort of the commander, or at best the commander advised by one of his immediate subordinates.

The Staff Course

The need for staff training is based on the degree to which the field and staff tasks differ, and the significance of those aspects of staff performance for which field experience provides little or no basis. Thus the formal staff course should aim to take the field officer and prepare him for staff duties by:

- Improving his communication skills, particularly with the written word.
- Broadening his understanding of the workings of his service, and of the military operations relevant to its mission.
- Improving his ability to think clearly and logically.
- Giving him an understanding of the organizational environment of the headquarters.

The training of the staff officer should come at the point in his career after he has acquired experience in the field, but before he is to move into a staff position for the first time. Undoubtedly in practice this ideal cannot be met in all cases. To the extent that this is not done, so the overall performance of the staff will be degraded. Certainly, those well endowed with the qualities required of a good staff officer will be able to cope, and the others will somehow get by. Nevertheless organizational efficiency will be lowered.

The case for a formal training course for the future staff officer as against on-the-job training is a separate study in itself. Here the high cost of running a formal training course must be weighed against the lower average efficiency of the staff officer in the 'learn as you go' system and the extra effort required of the more senior and experienced staff in tutoring subordinates. Certainly present organizational arrangements are tied to the formal training system. Any move away from this system would entail a major reorganization within all staff organs.

The length of course required to provide effective staff training is dependent in part on the quality of the officer corps. This in turn is related to the ability of the officers at entry into the service, their basic officer training course, the nature of their field experience and the degree

of self education that has been applied during their career up to the time they undergo staff training.

While it is the difference between field and staff that provides the subject matter for the formal staff course, it is the nature of staff work that dictates the method of instruction. Just as staff work is bound up with the written consideration of problems, both simple and complex, so the staff course makes great use of the staff paper. Seldom is the reference material complete. Thus the staff officer must add to each paper something of his own experience and judgement. Time is also a critical element, for rarely in staff work is there the luxury of the virtually unlimited time that is necessary if a complex problem is to be given the fullest possible consideration. Always the aim must be to balance depth of consideration against time and staff effort expended, itself a matter requiring skilful judgement.

Formal training of the staff officer must also be viewed in relation to overall career development and the general philosophy governing officer employment. Narrow specialization within the services is actively and consistently avoided. While each officer is trained initially in some basic specialization, all tend to have successive employment across a whole range of tasks, some related directly to their specialty, others of a more general administrative nature. Thus the military officer is a generalist rather than a specialist. Regular changes are made in both job and location. While such a scheme may mitigate against the development of a high level of experience within any particular job, there are compensating advantages in flexibility in staffing, and in the development of senior officers with a broad experience over the whole range of tasks that come within their area of responsibility. With the question of future higher responsibility in mind, the staff course provides a convenient mid-career point at which to consolidate the experience gained to date, and to ensure that the essential basis is laid for future promotion.

Staff and Command

While the staff course has as its aim the preparation of officers for staff duties, it is also relevant to the task of the senior commander. At the higher levels a commander invariably works with and through the staff officers of his headquarters. Thus he heads a staff group as well as subordinate formations and units. Furthermore, by having previously worked as a staff officer, the commander will have had some experience in dealing with problems at the level at which he must now exercise his command responsibility.

The Joint Staff Officer

The rationale for joint staff training arises from the differences in staff work in the joint as against single service environment. Joint staff agencies of any significance are relatively new to Australia. They are still very much in a state of development. This in itself is a strong reason for joint staff training. Unless those who form the joint staff clearly understand the organizational environment in which they have been placed, joint staff agencies will not develop along sound efficient lines.

No longer can military operations of any significance be carried out in a single service setting. In particular air has become an integral part of both land and sea (maritime) operations. Further, for an island nation such as Australia all three services have a close and vital part to play in the nation's defence. For future operations, either in Australia or South-East Asia, the joint headquarters will be of increasing importance. Already the Defence Department, as the nation's top defence policy body, has developed a great deal of joint staff expertise.

Compared with its single service counterpart, the joint headquarters tends to operate at a higher level in the overall chain of command. This in turn means that the joint staff officer must, in general, work with even broader problems, problems that often encompass a great diversity of considerations. Rarely at this level are there people who have a sufficient grasp of all aspects of a problem. Thus group effort is required. In such a group, where no one person is predominant, compromise as well as collective judgement must be applied. An open mind is also needed for at times it is essential that matters, that have in the past been taken as basic tenets, be put to question.

In the multi-service environment of the joint headquarters the staff officer as well as having a sound, yet broad, knowledge of his own service and its operations, must be able to understand the viewpoint and problems of the other services. Different operating environments, training philosophies and traditions engender in the officers of each service a different approach and scale of priorities. In the joint staff both single service bias and interservice rivalry must be kept well in the background if effective co-operation is to be achieved.

At the national level political and economic considerations must be added to the separate inputs of the three services. Here the military

staff must work closely with the public service, giving rise to the need for the same clear mutual understanding between service and civilian staff that is required between staff officers from the three armed services. Furthermore, at this level the service officer must realize, and accept, that the commander is a politician, not a service officer.

Organizational arrangements within a joint headquarters differ from the single service headquarters in two important respects. With the need to cover a diverse range of subjects, consultation across the lines of command is an essential feature of almost every activity. To a greater extent the committee or working party is used. Papers are often written by a team rather than an individual. Thus the joint staff officer must be able to work with others who have a different background and outlook to his own, and to work even more closely with them than in the single service setting.

Because of the relative newness of the joint staff headquarters and the reluctance of the individual services to hand over all authority, the organizational arrangements within such a headquarters tend to be less precise. Duties and responsibilities are not always clearly defined either as to individual positions or to the division of responsibility between the various branches. Nor does the commander have the same degree of authority as does the single service commander. Often, certain aspects related to his subordinate units and functions within his headquarters, are outside his authority. These aspects may even be the responsibility of officers who are in other respects subordinate to him within his command. Multiple chains of command are also not uncommon, particularly at the national defence level.

Joint Staff Course

As with the single service staff course so the joint staff course is based on the degree to which the single service and joint staff tasks differ. Thus the joint staff course should aim to take an experienced staff officer and prepare him for joint staff duties by:

- Broadening his understanding of the viewpoint and problems of the other armed services and the public service.
- Improving his ability to work in a group problem solving situation.
- Broadening his understanding of joint military operations, and of the political and economic considerations related to national defence policy.

- Giving him an understanding of the organizational environment of the joint headquarters.

Unless there is to be considerable overlap, the joint staff course must be a progression from the single service staff course and staff experience. The starting point for the joint course should assume a degree of competence in staff work, and in particular of skill with the written word. The officer must also have a sound understanding of his own service, its organization, operations and problems.

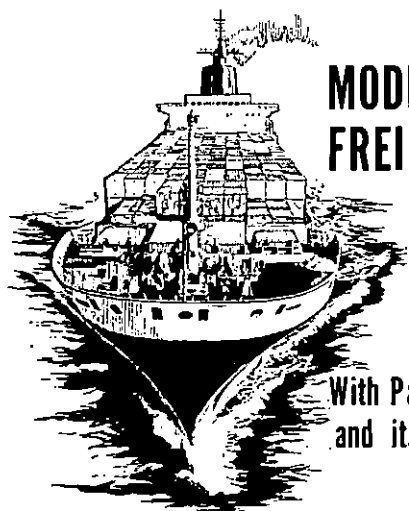
Having to design a course suitable for officers with a diverse background of experience within the three services and the public service does present some difficulty and the need to compromise. On the other hand this diversity is also a necessary part of the course. All the range of considerations that impinge on joint staff work, particularly at the national defence level, must be reflected in the course. This can be done by ensuring maximum participation by the students with their diverse backgrounds, as well as covering a wide range of subjects in the syllabus.

As with the single service staff course, the methods used on the joint course are a reflection of the nature of work in the joint staff setting. The staff paper is still central, but is more often prepared by group rather than individual effort. While the collective consideration of a problem by the group may ensure a more thorough coverage, its effective translation into a concise, well ordered and agreed paper can be a difficult task.

Conclusions

The three levels of experience — the field, the staff and the joint staff — form a progression along which the career officer moves. Although he may move to and fro between these areas, his initial movement upwards can be greatly assisted by the formal staff course at both the single service and joint service levels. Each level aims at the successive broadening of his knowledge and extension of his horizons, first to his own service, then to the overall defence effort.

Sound staff training is a corner-stone in any military organization. Such are the complexities of modern warfare that no commander, unless he is supported by a competent staff, can, irrespective of his own ability, give effective leadership and direction to his subordinate units. Without this leadership even the most gallant and professional troops have little chance of achieving success in battle. □



MODERN DEVELOPMENTS IN FREIGHT HANDLING BY SEA

With Particular Reference to Containerisation
and its Application to the Australian Army

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PART 1

CONTAINERISATION of cargo is not a new practice: its origin is lost in antiquity; however, research shows that systems for packing goods for movement were known in the thirteenth century when stern loading ships were used to carry military supplies — including horses — across the English Channel.

In the light of this it is of interest to record that the horse box used by The Adelaide Steamship Company for loading horses onto their ships in the South Australian intrastate trade period 1875-1925, was one

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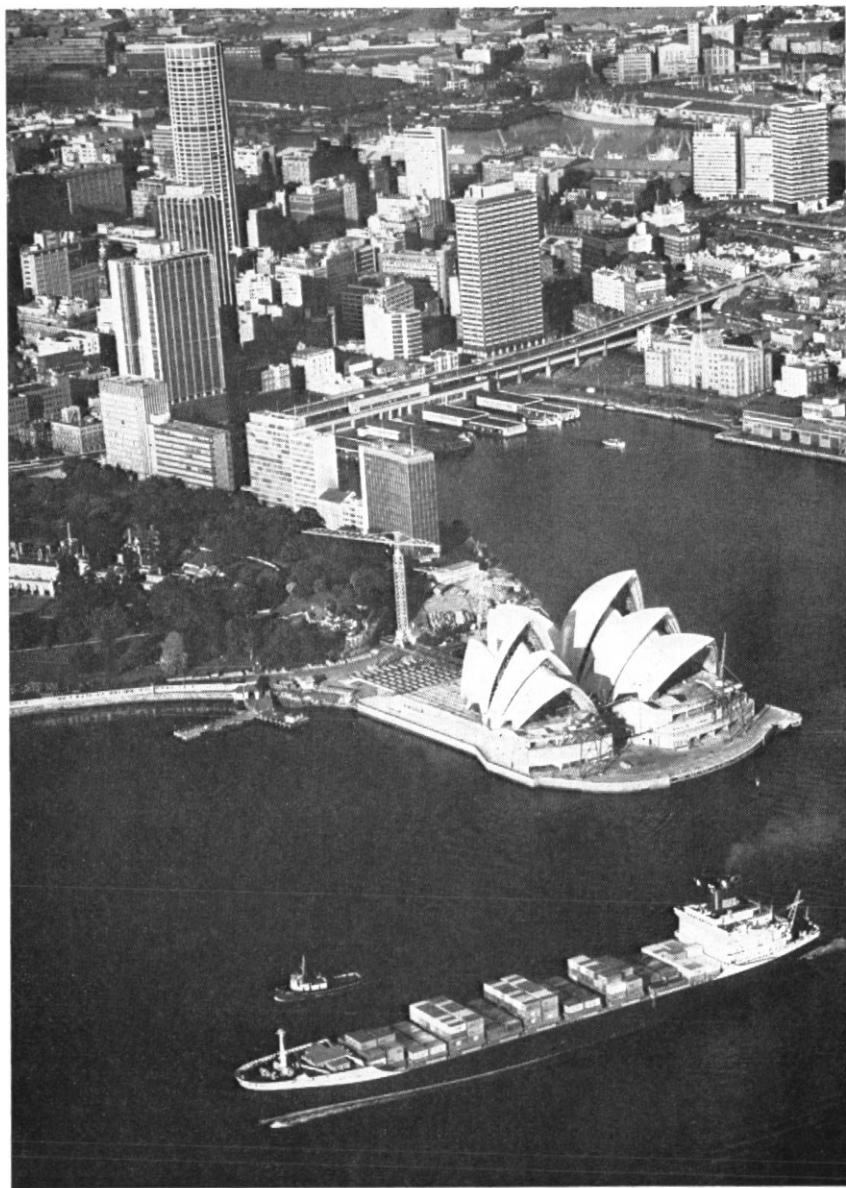
of Australia's early forms of container. The horse box however was primarily a loading device. The earliest form of container for goods seen in Australia was the square tea chest, used by the earliest settlers for packing their personal belongings on the long three to four months journey from England.

Later the tea chests gave way to small cubical iron tanks of about 100 gallons capacity. These containers served a twofold purpose; one was to enclose and protect personal effects, the other was to store precious water on arrival in notoriously dry country. This 100-gallon tank was later superseded by a 400-gallon unit with a circular opening on the top and closed with a cast iron lid having a recess for a bar grip in the middle. Some of these can still be seen in northern Victoria and South Australia today.

The containerisation of general cargo for carriage by sea has been practised by some Australian shipping companies for the past forty years. The first containers introduced by William Holyman and Sons Pty Ltd about 1930 were in fact little larger than the early settlers' 400-gallon tanks. The Holyman organization continued with this concept of enclosing dry general cargo in various stages until, prior to the existing 'standards' for containers, it developed its 16-foot 14-ton container in the mid-1950s. The *William Holyman* was specially built for their carriage between Melbourne and Tasmanian ports. Unfortunately the selected 16-foot size (based upon an eight pallet module) is now not compatible with current developments and so a limited closed circuit operation, where the containers do not leave the Company equipment, has been evolved.

Containerisation, as an effective 'door to door' shipping operation, began in the United States when a specially converted freighter was commissioned to carry general cargo (fully protected against loss by damage), to cut down operating costs. A little later the system was adopted for the carriage of Hawaiian produce between Honolulu and San Francisco.

The next big advance was the construction for the Australian company Associated Steamships Pty Ltd of MV *Kooringa* and her commissioning in June 1964 for the company's Melbourne-Fremantle Door to Door Seatainer Service. Of 6,500 tons deadweight *Kooringa* was the world's first cellular container ship, designed and built as such from the keel up. The seatainer service the vessel instituted was the



(Industrial Illustration Pty Ltd)

Overseas Containers Pty Ltd vessel *Encounter Bay* moving out of Sydney Harbour on her north-bound maiden voyage in 1969. The overall length of the vessel is greater than the height of the Australia Square building shown in the background.

world's first regular, long distance, door to door container operation, and the results were closely watched by international shipping companies.

During the first five years of operation by *Kooringa*, in the Melbourne and Fremantle Seatainer service, the vessel never missed a single scheduled sailing and thus placed the seal on the efficiency of such a system for long ocean hauls.

Two British shipping groups are currently operating cellular container ships on the Australia-Britain/Europe service. The major group, Overseas Containers Pty Ltd, intends initially to use six ships, and the other, Associated Container Transportation, three ships. Both groups began their services early in 1969. A French shipping company, *Messageries Maritimes*, plans a single ship service on this route.

The two British groups envisage limiting their stops in Australia to the ports of Fremantle, Melbourne and Sydney and in Britain to Tilbury. (The British dockers were almost successful in transferring this terminal to Antwerp by their short-sighted 'anti-container' strike actions). These are known as 'terminal ports' and they have a facility at the wharf which is used as a marshalling area for containers which are to be loaded onto, or have been discharged from, the ships. The companies will also use 'depots' which may or may not be close to the terminal. It is at the depots that loose cargo is received and packed into containers or inwards 'mixed containers' are unloaded.

A group of Swedish, Dutch and Danish shipping companies plan to run a containerisation service on the Britain-Continent run, using 'Scandia' type ships for speed of operation on the short haul service. These vessels were designed mainly to carry newsprint, paper pulp and general cargo. They are constructed in such a way that the greatest possible flexibility of cargo handling is achieved. Cargo can be pre-slung, unitised, or packed on flats or in containers. Holds are covered by hatches which can expose almost all the hold making it possible to stow cargo vertically with cranes, virtually eliminating horizontal handling and placing of the cargo within the ship.

The containerisation service between Australia and Japan began in 1969 and is being jointly operated by the Australian National Line and the Japanese 'K' Line. Both roll on-roll off vessels and cellular container ships are being used. In 1970 Farrell Lines Inc. of New York commenced a fully cellular ship programme running between Australia and the east coast of the USA.

No cellular container ships are planned yet for the Australia/New Zealand run, but the unit load and roll on-roll off methods which have been successful on this route are to continue and probably be expanded.

In mid-1968 the Australian Senate Select Committee reported the results of its investigation into 'the container method of handling cargo'. The report specifically dealt with containerisation in Australia: one of its more important and alarming findings was that 'there has been an element of haste in introducing the system to Australia, without sufficient time for adequate consultation between the many interests involved'. The report also states that 'a great deal more action appears to have developed in reaction to the Committee's existence, than the imminently looming prospect of containerisation'.

The more important recommendations made by the Committee were:

- A joint Commonwealth/State consultative committee be appointed to supervise the introduction and early operation of containerisation.
- Shipping operators should not be protected by the government from a wrong investment decision.
- Special consideration should be given to the problem of exporting the Tasmanian fruit crop.
- Containerisation could encourage the development of monopolies so there may be cause to use the Trade Practices Act.
- The opportunity could be taken to extend the use of the Australian National Line overseas if it would promote the interest of efficient and economical shipping in general.
- The problem of adapting roads to containerisation should be examined by the Commonwealth Bureau of Roads.
- New South Wales must adopt a more positive approach and prepare a blueprint for the future development of a total container port complex.
- Quarantine and Customs examination should be made available twenty-four hours a day.

Little or no information on the future activities of this committee are available and it is believed to have been disbanded after the presentation of its report. Many of the details which it considered have in fact been implemented, and most of the fears described in their early meetings

have not come to pass. There is, perhaps, a problem of over tonnage on certain routes, for example Japan/Australia. However, the companies appear to be meeting this problem by salesmanship and good public relations, which is paying off in an increase in cargoes selected for containerisation, with an increase in profitable cargo for the companies in the trade.

In this article it is proposed to discuss the evolution of the present day container operations, the supporting equipment necessary to complement any container 'family' and the operation of a marine container organization. Consideration will also be given to recent developments and to areas of concern to both industry and the military.

A discussion on container sizes and their evolution will be followed by some details of the types of shipping containers currently in use, and a section devoted to the container operation. This section will discuss the essential equipment for container handling, trends in modern ship design, and will conclude with a short synopsis of the method of handling containers through a sea terminal.

The final section of the paper relates to military applications of containers, including the current situation in the United States, British and Australian forces, and considers what steps the Australian Army must take in the containerisation field.

THE EVOLUTION OF CURRENT CONTAINER SIZES

Australia, in 1962, was the first country to produce a 'Standard' for freight containers. When the International Standards Organization (ISO) was considering recommendations for freight container standards, much work was done on the basis of the Australian ideas.

In Australia we now have published by the Australian Standards Association three relevant standards to cater for the container industry. The three standards are:

- No. E39, Small Freight Containers up to 10,000-pound capacity (published 1965).
- No. E34, Freight Containers of 8, 16 and 34-foot lengths (published 1966).
- No. E44, Freight Containers of 10, 20 and 40-foot lengths which are 8 feet or 8½ feet high (published 1969).

The Australian standards were based on the regular 46-inch by 46-inch pallet, as this country is fortunate in being one of the few in the

world which has only one standard sized pallet in use. The Australian Standards Association Standard No. E34, Large Freight Containers, specifies lengths of 8, 16, and 32 feet providing for the lengthwise stowing within the container of 2, 3 or 8 pallets. The internal dimension required by the standard is 93 inches, to permit the loading of two 46-inch pallets side by side within the container. Unfortunately this 'pattern' of loading is rarely, if ever, achieved as container manufacturers have difficulty constructing to the inner width dimension of 93 inches. Also of course pallets vary in size, particularly the loaded dimensions, and the theoretical advantages of close stow, high utilization of container space and obviation of dunnage within the container are not being achieved.

The original 8, 16 and 32-foot sizes did not give a high enough load factor and so the 20 x 8-foot container was devised, using as a basis the largest freight wagon commonly in use throughout world railway systems, the eighty-footer. This length was broken down into half sizes of 40 feet, 20 feet and 10 feet to gain economic and modular loading advantages. The eight-foot width measurement resulted from similar considerations, but this time related to the average dimensions of road vehicles at that time throughout the world, and so the current ISO Standard container sizes were developed.

Several Australian authorities are now pressing for increased height and width dimensions away from the ISO standard of 8 feet x 8 feet. As 2.5 metres (8 feet 2½ inches approx.) is now acceptable as a load and vehicle width in UK, the Continent, Japan and all States of Australia (except Tasmania) the tendency is to take advantage of this added floor width in order to obtain a more effective and more economic load density. Some countries are already using 2.5 metres whilst the USA is trying to gain approval for 8 feet 6 inches to be the maximum acceptable width.

In regard to the height dimension there is a positive move towards an increase to 8 feet 6 inches overall in an effort to increase the internal value and achieve a better load density. The United States again wants to 'go bigger' in this direction with a height dimension of 9 feet 6 inches.

The majority of cellular container ships in service today have the ability to stow the 8 feet 6 inches (and in some cases 9 feet 6 inches) high containers. However, any variation to the width dimension

would require major reconstruction of the hull cells. Of course movement in non-cellular vessels would not be affected.

As perhaps an example of the present 'state of the art' the Australian National Line has adopted 2.5 metres wide, 8-foot high units for the Australian coastal trade while on its Asian services will use 20 x 8 x 8-foot dry cargo containers and 20 x 8 x 8½-foot refrigerated containers.

In the United States, where there are many and varied pallet sizes, companies have been forced by economics into the purchase of 20, 24, 30, 35 and 40-foot containers to ensure good loadings. The majority of these operations however are closed circuit, and the boxes remain within the one organization, and its handling equipment capabilities. All open contractor and container hire companies are using ISO standard containers.

In Europe, and more particularly in Germany, there is a move towards the metric dimensioned containers and recently over one thousand 2½-metre (8 feet 2½ inches) containers were ordered by one German company.

The continued introduction of non-standard container sizes is in many ways to be regretted. Any benefits to the owner are perhaps marginal compared with the losses incurred by precluding expansion outside the closed circuit operation to which the container will be tied. Urgent additional container needs cannot be met by hire, as the hired container will not stack or stow with the non-standard container. If the owner had designed his product for a tight or a modular stow, in the non-standard container, the product would not fit a hired container satisfactorily. And yet, as a fact of life, standards, unless economically attractive, do not last and must change with the economics of the day.

TYPES OF SHIPPING CONTAINERS

The types of shipping containers available to shippers continue to grow at an amazing rate. To many the shipping container is just a steel box, in which cartons or wooden boxes are packed for the sea stage of their journey between consignor and the consignee. This may have been the case in the early days of containerisation but recent developments now permit the containerisation of almost any cargo in an economically and speedily handled container.

Construction materials vary with the manufacturer and in many cases the cheap availability of the materials in the country of origin. Currently steel, stainless steel, wood ply, fibreglass and aluminium are all commonly used and in many cases combinations of these materials have been devised to produce a container suitable for a major shipper. For example, as well as the steels, exterior panels can be glass fibre, reinforced polyester, sea water resistant aluminium, glass fibre coated plywood or waterproof plywood coated with epoxy or polyurethane paint. For inside walls and ceiling GRP coated plywood, or plywood coated with epoxy or polyurethane paints, aluminium or stainless steel may be used depending on the customer's requirements.

Containers are built with doors at one end, both ends, on the sides or any combination of these positions to give ease of loading and unloading in warehouses and factories. Although all containers are built to cater for the use of forklift trucks inside them, many situations make this difficult and, for example, the loading of a rail wagon borne container at a country siding would make the use of the side doors highly desirable.

Where very high density cargo is normal, more economic shipping is achieved by the use of half height containers which may be filled to capacity and then stowed in pairs in the normal single container locations. Other similar variations for special cargoes also exist, such as the open topped container for the carriage of heavy pumps and motors. These use crane loading and unloading of the container because of high individual weights, but normal handling methods and stowage as a container whilst in transit.

Refrigerated Containers

For refrigerated cargo an insulated container of unique design is used. The refrigeration may be provided by either a 'clip on' refrigeration unit which circulates cold air through the container, or by the use of a centralized, ducted, cooled, forced air system.

The 'clip on' refrigerator units will operate almost indefinitely without attention and will automatically control the internal temperature to pre-set requirements. They do not normally have their own power supply but can be plugged into a 240 or 415-volt supply. Where necessary, road vehicles, rail waggons or container storage areas can be fitted with a self contained diesel-electric generating set to provide

the necessary power. These sets currently have an unattended operating endurance of about 36 hours, and have proved robust and reliable. Some units are also being powered with either gasoline or liquid petroleum gas engines to obviate the need for additional generators.

In the older vessels, the containers were loaded and the 'clip on' units plugged into the ship's power supply for the journey; however more modern container vessels use a cooled, forced air system, operating from the ship's central refrigeration plant. Air coolers, and delivery/return ducting are fitted to certain holds and these serve the containers in vertical banks six high. A brine system serves the air coolers from a central refrigeration plant and brine room in the ship's engine room.

The temperature of the chilled air delivered to each container bank is monitored and also the return air from each individual container. This data is automatically logged by a typewriter type printout, and incorporates visual and audio alarms in case any temperature varies from the prescribed limits.

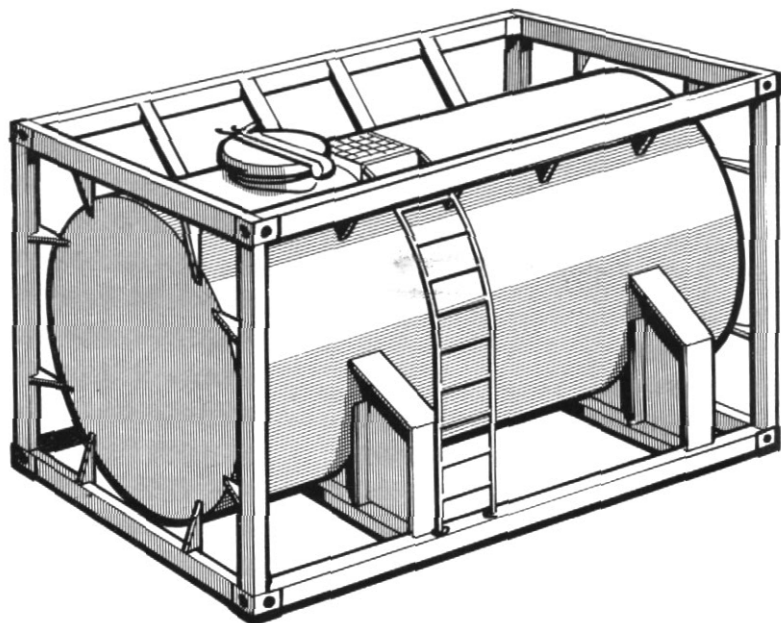
Shore terminals in some areas are now providing a similar system of ducted cooling to 'hold' containers prior to loading or delivery to the consignee.

Other developments include the automatic, thermostatically controlled release of nitrogen or other gas into the container, in the same manner as is currently being investigated for army field refrigeration. The replacement of the nitrogen cylinder whilst containers are stacked either on shore or in a vessel at sea, coupled with the non-standard nature of the 'fuel' used, compared with electricity or diesel generators, appears to be limiting this type of refrigeration to major container users.

During a trial in Queensland, an insulated container load of frozen meat was held, in open sunlight, without refrigeration, for 96 hours with ambient maximum/minimum temperatures of 117° to 62° Fahrenheit. At the end of the trial period the meat was removed from the container and approved for export without exception. Shipping companies are working to a minimum safe period of twenty-four hours without refrigeration; however they are confident that this will never be reached.

The Container Tank

The carriage of liquids in containers is accomplished by the use of a standard container profile framework, surrounding a tank for the cargo.



5000-gallon, 20-foot Tank Container for the carriage of bulk liquids.

This allows the liquid container to be handled and stowed in the same manner and locations as for the normal container, stacked with it and transported by the standard motor vehicle. Fittings in the tank containers vary according to the requirements of the consignee. Bulk-heads and piping to allow the carriage of different commodities, heaters for heavy oils, special linings for edible cargoes, insulation and pressure relief fittings are all in use today, so that there are few liquids that cannot be suitably handled in this way. Currently bulk shipments of gin and whisky from the United Kingdom are being backloaded with Australian wines for the British and Continental markets.

Hopper Containers

Powdered or granular dry cargoes may be shipped in hopper containers which are standard sized dry cargo containers, but fitted with roof hatches for filling purposes, and a front end hatch or chute for dumping the cargo by lifting one end of the container. Cargoes so far successfully moved by this method include flour, superphosphate, sands, gravel and chemical powders. All fittings for the lifting and stowage of

the hopper containers are standard so that mixed loading and clearance of a vessel is normal within any safety limitations.

Although the containers described may vary in detail, the ISO requirements ensure that compatibility between container manufacturers is maintained. These ISO requirements include such details as dimensions, corner fittings for lifting and restraint, stacking requirements, floor and roof strengths, testing, marking etc.

Collapsible and Nesting Containers

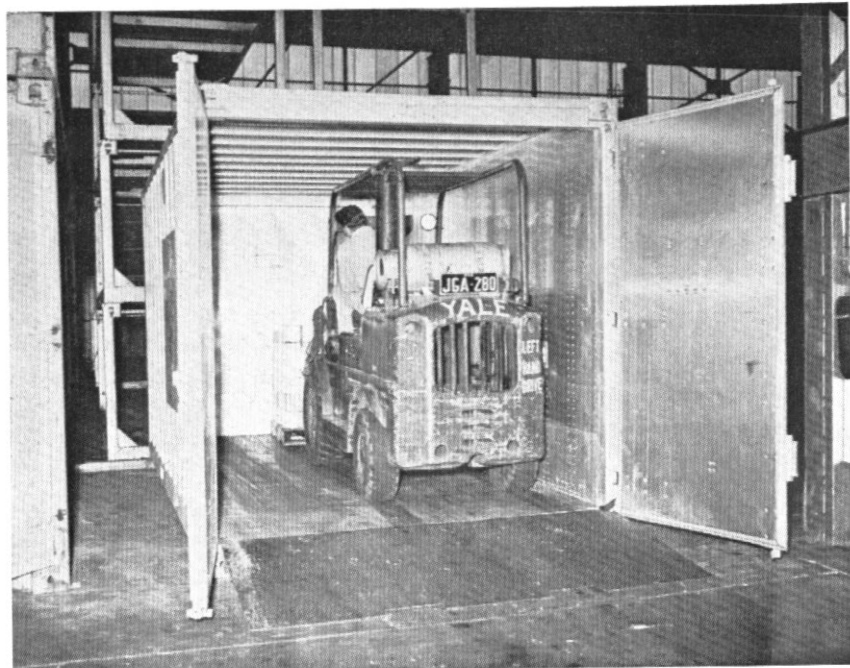
Because of the cost of returning empty containers to their point of origin, when one-way utilization only is available, British interest has been shown in the development of collapsible and internally nesting containers. The collapsible container is difficult to keep weatherproof, and the loss of erection jewellery and the wear of repeated erections and knock-downs, tends to increase the cost of maintenance to a prohibitive level. Nesting containers, which permit the internal carriage of other containers in the main or largest sized container, suffer from many disadvantages, not the least of which is their differing capacities, which prevents the selection of optimum sized modular packages for the cargo to be shipped. Vertical stacking is difficult and to get full value from their use all shipments forward must be in matched 'sets' of containers, to allow full nesting for the return journey. This is economically difficult to achieve.

CONTAINER OPERATIONS AND DEVELOPMENTS

Container Handling Equipment

The travelling gantries which earlier marked, to the unprofessional eye, the outward symbols of the new style container ships are rapidly disappearing. The economics of fitting large capacity, complicated cranes to ships whose main profit earning capacity is at sea, with the expensive cranes stowed, secured but exposed to the ravages of the weather, has been realized and almost all the special purpose ships' gantries have now been removed to shore. Here the one set of expensive cranes can handle many ships and remain almost continuously in active productive work.

This has a far reaching effect for the prospective military user of any commercial container vessel, as shore discharge facilities, of the capacity and reach required to handle the container vessels, would not normally be found in any but the more developed countries. MV



(Australian Container Transport)

The 20-foot container is normally loaded and unloaded using forklift trucks powered by LPG motors to prevent carbon monoxide gases in the confined spaces.

Kooringa, the world's first container ship, was originally fitted with ship-board gantries but once the 'system' of long ocean container hauls was proven the gantries were removed in favour of shore installations. A further reason in this case was the increased container capacity which the removal of the gantry weight and bulk permitted. In future, large self-sustaining container ships should no longer be expected, although for feeder services some will of necessity remain.

One German development to counter this trend, and also to allow economical handling of containers in smaller ports, and by non-specialist shipping, is the 'Gemini Twin' deck crane with capacities of both ten and twenty tons. Designed for installation between adjoining holds on the deck of a cargo vessel, its two independently operated jibs enable it to handle two loads at once, one crane working forward and the other the after hold of its 'pair' of holds. The two jibs may work the same hold if the clearance arrangements for the cargo are suitable; for example,

one jib to the wharf and the other to barges alongside. For heavier lifts the two jibs are synchronized and the crane can lift and slew one heavy load from either the forward or after hold of its 'pair'. Each crane unit has three turntables, one at the base of the whole equipment for use when synchronized, and one for each jib for independent slewing when used separately. The base turntable rotates through 360° and the jib turntables can slew 210° independent of each other. When operated independently or in unison the jibs are controlled from portable remote control 'wander leads' which allow the operators to move where they have a clear view of the whole loading or unloading sequence.

The handling of large shipping containers on shore is a separate consideration beyond the scope of this paper; however, much developmental work has been carried out and satisfactory solutions in the form of cranes, straddle trucks and forklift trucks are now available for all operations. Basically, the more expensive straddle truck is far superior to the common forklift truck for container operations, and effects its own economies in its reduced working area, greater speed of travel, close stacking ability and greater visibility for the operator.

Also developed are a series of portable, hydraulic container hoists, for use where limited numbers of containers require handling, either on to or off road transport. These hoists have no movement capabilities when loaded, but can lift a container from a vehicle, which then drives away so that the container can be lowered to the ground. These hoists are readily portable in a small vehicle or, of course, in a container.

MONTHLY AWARD

The Board of Review has awarded the \$10 prize for the best original article published in the May 1971 issue of the journal to Major H. L. Bell for his contribution 'Language and the Army of Papua-New Guinea'.

REVIEWS



SMALL NATION SURVIVAL: POLITICAL DEFENSE IN UNEQUAL CONFLICTS, by V. V. Sveics. (Exposition Press, New York, 1970. \$8.50.)

Reviewed by Dr Beverley Male, Lecturer in Government, RMC Duntroon.

Small Nation Survival is a polemical rather than a scholarly book. In his introduction Sveics says: 'I write as a protagonist of small nations, searching for means that give them a reasonable chance of resisting attacks on their internal and external freedom.' He argues that a new defensive strategy, using political means to achieve political ends is better suited to exploit the strength of small nations and the weakness of their attackers, than military defense which is virtually bound to be defeated.

His thesis is that wherever nationalism has been well developed and the people united, the militarily stronger attacking power has eventually been defeated. This is an attractive argument and it is a pity that Sveics has spoiled it by overstating his case so often, for while national resistance has frequently been an important element in the failure of such an attack, it has seldom been the sole cause of the defeat of the big power.

In support of his argument Sveics points to the resistance encountered by Napoleon in Spain: 'While most reports attribute the victory to the Expeditionary Force under Wellington, they do not explain why the Spaniards were beating the invaders even when the English were losing.' Yet one can hardly ignore the importance of the British army in contributing to the French defeat in Spain.

Sveics also refers to the Arab nationalist revolt against the Turks in 1915: 'The Turks were doing well in the war; they checked the English and French landings at the Dardanelles and stalemated the British offensive in Palestine. But against Lawrence they found no defense. His campaign spread with unexpected speed and force, setting into motion an

avalanche of Turkish setbacks that ended with the collapse of the Ottoman Empire.' Certainly the Arab revolt contributed to the Turkish defeat, but Sveics ignores the fact that in 1915 Turkey was only just able to hold Gallipoli, that Turkish lines were over-stretched in Palestine, and that the morale of the ill-fed and ill-clothed Turkish forces was extremely low, as was that of the hungry Turkish population at home. He also ignores the fact that the Arab nationalists were heavily dependent on British military support.

Another factor which Sveics overlooks in his enthusiasm for the success of what he calls 'political defense' is the extent to which the large power is prepared to press the attack by the overwhelming military means at its disposal. Certainly the Irish were successful in their struggle against the British, and no one would dispute the effectiveness of Gandhi's campaign in India. But the fact remains that in both cases the British were reluctant to use the force at their disposal.

The same point can be made in the case of the Soviet invasion of Czechoslovakia, to which Sveics constantly refers. There is no doubt that the passive resistance of the Czechs embarrassed the Russians and helped undermine the morale of the invading forces. Yet it is clear that the Soviet Army was reluctant to play the role of occupying power: the small number of casualties (less than 100 in the first week after the invasion) and the absence of a campaign of mass arrests testify not so much to the success of Czech resistance as to Soviet restraint.

Finally one cannot help wondering why Sveics has mentioned the war in Vietnam only once, and then in parenthesis. As a case study of successful resistance of a small nation against the military might of a great power, it is one of the best examples he could have found. □

FIGHTING MARINES, by Patrick Pringle. (Evans Brothers Ltd, London, \$2.00).

Reviewed by Major J. Fletcher, GM, AHQ Canberra

THE Royal Marines have enjoyed a colourful and active history since their inception over three hundred years ago as the Admiral's Regiment. A host of tales can be told of laurels and honours won on sea and land around the globe, giving the Corps a unique tradition amongst today's armed forces.

This book is a collection of such tales, beginning with the almost accidental capture of Gibraltar in 1704. Chapters are self contained, most of them about a specific battle, campaign or war. Two chapters are devoted to accounts of individual valour covering many engagements. But for the immortal deeds recalled here, some of these actions might otherwise be lost in history. The famous Zeebrugge raid is well told, as is Major Hasler's daring and audacious attack on Bordeaux with his 'Cockleshell Heroes.'

The author has kept the title of his book well in mind in his writing. There is hardly a page that does not include some fighting, whilst armed forces other than Marines receive at best only passing mention. This bias could lead an unwary reader to form exaggerated opinions — as when the author states '... the British Marines performed the more peaceful imperial task of founding the Commonwealth of Australia'. Whilst not glorifying war, the author does emphasize the glamour associated with fighting. One gathers the impression that Royal Marines are never tired, bored, grumbly, hungry, dirty or dispirited. Normal service difficulties and hardships are forgotten for the glory of the fight. These shortcomings, if shortcomings they are, should be apparent to the military reader. After all, the book is of fighting, not suffering, marines.

Patrick Pringle's style smacks of that of a novelist rather than of an historian. He deliberately avoids including technical matters, detailed orders or lengthy plans. The illustrations and sketch maps help bring to life some of the exciting achievements described. Short, well-constructed, descriptive sentences turn interesting facts into engrossing historical stories. The later chapters, about more recent times, are not as racy as the earlier ones. More personalities, units and actions are included in an apparent endeavour to do full justice to the many and difficult tasks undertaken by the 'Royals' during World War II. Some licence is taken by putting words into the mouths of historical figures. Patrick Pringle uses this technique well, both to achieve the dramatic and to illustrate the thought and feeling prevailing at the time. The question 'What about taking Gibraltar instead?' asked during a Mediterranean Council of War, succinctly shows how admirals and generals were allowed to decide such momentous matters in those days, before instant communications deprived them of independent action.

This book should especially appeal to schoolboy readers and could well foster some military vocations. The military reader will gain

interesting and informative sidelights to many campaigns. He will in particular be fortified by the *esprit de corps* and selfless courage shown by generations of these 'Fighting Marines.' □

HANOI'S STRATEGY OF TERROR, by Douglas Pike, (SEATO Publication 1970, 30 pages).

MASSACRE AT HUE, by Douglas Pike, (SEATO Publication 1971, 30 pages, illustrated).

WHY I LEFT THE TERRORISTS, by Bunkong Toemsuk, (SEATO Publication 1971, 28 pages, illustrated).

These three booklets are available, free of charge, from the Public Information Office, SEATO Headquarters, P.O. Box 517, Bangkok, Thailand.

Reviewed by Major A. R. Howes, Army Design Establishment, Melbourne.

A GLANCE at the indexes of past December issues of *Army Journal* show few opportunities for a personal glimpse of the people of South Vietnam or Thailand, or other nations to our north. Last year, for example, one article alone — 'The Camp of Tran Van Hoang' (AJ August 1970); and that dealt with the enemy, not the people for whom Australians are dying.

Know your enemy! Yes, surely; but know your friends too.

This review is pitched at those readers who have never left Australia's shores.

Here is the dilemma: where can an officer, NCO or soldier read freely of current events in South-East Asia? *Time* and *Newsweek*, etc. have their place, but booklets such as the three listed above are also useful.

Douglas Pike wrote a monograph 'The Vietcong Strategy of Terror' for the United States Mission, Vietnam, in February 1970. Pike is a United States Foreign Service Officer, and an experienced observer of the Vietnam scene. The South-East Asia Treaty Organization has edited Pike's monograph to produce two of the booklets reviewed.

Hanoi's Strategy of Terror attempts to explain the reasons for the Communists' use of terror as a tool of warfare. The foreword highlights how 'terrorism has focussed the people's attention on the ruthless tactics of the Vietcong and has strengthened their conviction that security and freedom are best attained within a democratic framework'.

The more interesting is *Massacre at Hué*. In stark contrast to the AATTV article 'Victory at Hué' (*Army Journal*, February 1969), Douglas Pike tackles the Communist rationale behind what appears to be the random slaughter of thousands, not hundreds, of Hué civilians. The value of *Massacre at Hué* is that it brings alive the skeletal facts contained in one paragraph on page twenty of the AATTV article cited above. That was the attention the civilian population received — one paragraph — six sentences!

Pike says, 'Hué . . . is a silent rebuke to . . . us inheritors of 40 centuries of civilization, who have allowed collectivist politics — obstructions all — to corrupt us into the worst of the modern sins, indifference to inhumanity.'

The third booklet reviewed, *Why I left the Terrorists*, gives an insight into the Peking and Hanoi-backed terrorist groups in the North-East of Thailand. Bunkong Toemsuk is one of the defectors, a peasant from Thailand's Ukon Province, who was duped into going to North Vietnam for military training and then sent back as a terrorist. The booklet is Toemsuk's story, translated from Thai, as he told it.

Should you write to SEATO Headquarters for one or all of these free publications, remember that you could ask to be placed on their mailing list, free of charge, for SEATO publications, including the *SEATO Record*, published six times a year.

Earlier I would have encouraged the Australian Army to obtain copies of these booklets in bulk. But it is the individual who has to decide whether to read a publication or not. Therefore, let servicemen choose to write, or not, to the Public Information Office, SEATO Headquarters. □