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AUSTRALIAN ARMY JOURNAL

A periodical review of military literature

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(Australian War Memorial)

The advance by the 1st Australian Light Horse Brigade on Jericho, which was entered on 21 February 1918. H. S. Gullett, *Sinai and Palestine*, p. 537 wrote, "In all the harsh highlands of Palestine there was no area so forbidding as the country covered in this advance . . . the scene is one of sheer desolation. East and north-east of Jerusalem, the wild jumble of steep and rocky hills is for eight months of the year a gaunt place of fierce heat, strong winds and blinding dust storms,

Psychological Operations: A New Field

*Captain D. A. Dawe
Royal New Zealand Regiment.*

THE use of Psychological Operations in the tactical battle is a new field for Australian forces. Although it is probable that some form of Psy Ops has been used in the past it is unlikely to have formed part of a planned campaign.¹

Psychological Operations have been used extensively in Vietnam by United States and Army of the Republic of Vietnam (ARVN) forces for some considerable time. It is only recently, however, through the addition of a GSO Psy Ops to the staff of Headquarters, that First Australian Task Force has been able to devote continuous planning effort to this important function.

There are three ways of inducing people to do things: by force, by persuasion, or by a combination of force and persuasion. Psychological Operations in the combat zone uses the combination of the two. Psy Ops alone will produce few victories but by playing on emotions generated by the stress of war, by heightening fears and dissatisfaction, it can spark an individual or a unit into taking a desired course of action — desertion, surrender, mutiny, defection or passive resistance. To be effective, the theme stressed should be relevant to the situation. The theme should always appear truthful to the target group, although in some cases it may not be absolutely truthful because the target group is not prepared to believe the absolute truth.

Psy Ops is an all-embracing term which includes Psy War but also extends to neutral and friendly groups as well as the enemy. While Psy Ops is primarily concerned with the presentation of the media to the civilian population, generally in the connection with civic action programmes, Psy War can be defined broadly as operations

Captain Dawe commenced two years UK National Service in 1948 with the Middlesex Regiment — one year of which was spent in Hong Kong. This was followed by four years in the Parachute Regiment TA. He joined the New Zealand army as a private soldier in 1956 in London. Commissioned in 1959 he spent two years in Malaya (1961-63) as a platoon commander in 1 New Zealand Regiment. Posted to CMF (TF) Bn as adjutant, following appointments were SCQ 1 New Zealand Infantry Brigade Group and GSO3 (Ops).

Captain Dawe was posted to HQ 1 ATF in June 1967. After a period as a duty officer in HQ 1 ATF Command Post he became GSO3 Psy Ops.

in support of a combat situation. The two are, however, not easily defined and tend to overlap, either by design or by force of circumstances.

The practical application of Psy Ops may take the form of planned programmes, or immediate reaction, and could include some of the following themes: divisive themes working on differences between cadre, recruits and supporters, and the local population: anti-morale themes such as home-sickness, lack of support, food shortages, isolation, nostalgia and hardships. All of these themes are used in one form or another by 1 ATF through overt or covert means to effect desired changes in selected audience attitudes, emotions, opinions and behaviour. To achieve maximum success it requires the development of a programme based on detailed understanding of operational policy and aims, the fullest possible knowledge of the enemy, and a commonsense attitude to human behaviour.

Sustained psychological operations can produce changes in morale; either for improvement or destruction. Constant pressure on selected groups and the application of the correct theme can lower the morale of enemy troops or improve the morale of our own. In Vietnam, and in Phuoc Tuy in particular, stress is placed on separation from loved ones, known shortages of medical supplies, hunger and fear of death. Attempts are made to identify units, or individuals within units, and to use one of the selected themes to play upon known or suspected fears or hardships. Constant Psy Ops attacks of this nature lower the enemy's morale.

Psy Ops relies to a large extent on intelligence agencies. One of the critical elements of Psy Ops is to identify effective, susceptible target groups and develop detailed intelligence about them. In 1 ATF this is achieved by working in close collaboration with all intelligence agencies of the Task Force and, to some extent, with outside agencies. Much of the information used is gained from captured documents, PW and Hoi Chanh (ralliers).

Because Psy Ops is concerned with the persuasion of individuals or groups to adopt certain forms of behaviour one of the best sources of information to be exploited is the human being. This is achieved through the normal methods of interrogation of PW and ralliers, although the latter are treated somewhat differently to captured personnel. Ralliers are enemy personnel who respond to the Chieu Hoi (Open Arms) programme and come in voluntarily. The term

¹ The importance of psychological operations was demonstrated in the South-West Pacific Area in the concluding months of the Second World War when, through the activities of a propaganda section under the camouflaged title of 'Far Eastern Liaison Office' (FELO), many hundreds of Japanese soldiers, not normally prone to this action, were induced to surrender to the Allies. — *Editor*

surrender is not used in their case. They are not PW and are not treated as such. Hoi Chanh are given cash rewards for bringing in weapons or for leading security forces to weapon caches. After initial interrogation they are usually taken to the Chieu Hoi centre where they are kept, in company with other returnees, for varying periods during their readjustment to normal life. When they are ready to return to outside life they are given assistance to find work and, if married, to obtain housing.

Hoi Chanh are a particularly valuable source of information. They are usually co-operative and provide Psy Ops personnel with details of life in the Viet Cong ranks and locations and names of former comrades. They will often make tape recordings, calling on former comrades to rally, for use in voice aircraft and sometimes will write messages urging their friends to rally. These messages are printed on leaflets with a photograph of the Hoi Chanh on the reverse side and dropped in the target area indicated by the returnee.

To defeat the guerillas it will be necessary to separate them from their source of support. This support lies generally within sections of the local population. A primary target therefore, is the local population. The separation of the guerillas from the population is partially achieved by the use of civic action and 1 Aust Civil Affairs Unit has a continuing programme of assistance to the local civilian population in construction projects, medcaps, agricultural assistance, assistance to schools and hospitals and many other forms of aid. In addition to the civic action programme Psy Ops uses air and ground loudspeakers, leaflets, films and TV to keep the people informed of Viet Cong failures, broken promises, atrocities, conditions of life in their units and any other type of information which can be used to discredit — by making comparisons between theirs and Allied promises and achievements — the Viet Cong in the eyes of the civilian population.

An increasing amount of original thought is being applied to 1 ATF Psy Ops programme in order to exploit every worthwhile opportunity, although much of the effort remains dependent upon US resources. The majority of leaflets used are printed by the Psy Ops company in support of 3 Corps or the Psy Ops battalion in Saigon. All leaflet drops in 1 ATF TAOR are made from helicopters of 9 Squadron RAAF and usually on a daily basis. Quantities dropped vary with the operational commitment but range between six and ten million monthly.

Voice aircraft used at present are USAF. These are specially fitted out for Psy Ops tasks. Some of the tapes used are produced by the US Psy Ops company although, where possible and to suit particular requirements, tapes are made by interpreters of the intelligence section of 1 ATF.

During the planning and conduct of Operation 'Ainslie', which involved the movement and resettlement of villagers from Viet Cong supply areas to a new hamlet, Psy Ops were called upon to provide various types of assistance. This assistance took the form of preparing census papers for use prior to the movement of the villagers, preparing notices explaining what would happen during the initial movement, leaflets for airdropping showing areas out of bounds, tapes for air and ground use and posters, signs and maps explaining to the people what was, or would be, provided. Numerous warning and danger signs were also prepared showing prohibited areas which were to become free fire zones.

After resettlement a further and continuing Psy Ops effort is required to ensure that villagers are kept informed of events. This new village will now become a target for leaflet drops and voice aircraft, as and when required. In addition, various forms of entertainment such as films, TV and radio, cultural shows, magazines, newspapers and news bulletins are provided.

During the 'search and destroy' part of Operation 'Ainslie', contact was made with an enemy unit. Documents recovered from the bodies of Viet Cong killed were processed by a detachment of Divisional Intelligence and identity of the unit was established. A special leaflet was produced directed at the unit concerned and one hundred thousand copies were delivered twenty-four hours later. These leaflets and special tapes were used in the general area in which the unit was known to operate.

The measurement of reaction to Psy Ops media is difficult to determine. Although it is probable that some of the Viet Cong were affected by the fighting and the subsequent use of leaflets and voice aircraft the results of the mission may take several weeks to take effect and may not result in any known ralliers to 1 ATF. Enemy personnel induced to rally through this particular operation may well have rallied to another area. Thus, the results achieved may never be known and cannot be measured against the effort expended.

The task of Psychological Operations is an ever-expanding one. It has been proven under conditions prevailing in Vietnam today and promises to be a weapon for use, in varying degrees, in any theatre of war. It behoves all commanders to make a special study of this form of warfare which will undoubtedly become more refined and widely accepted in the foreseeable future. □

British Services Logistics Computers

*Lieutenant-Colonel A. E. Limburg, CVO,
Royal Australian Army Ordnance Corps.*

Introduction

A revolution is taking place in the three British Services. Computers are responsible for it. Properly used logistics computers should produce:

- Greater efficiency.
- A simpler and better service for users.
- The positioning of the right quantity of stores in the right place, at the right time, and at the right cost.
- More adequate and timely information on which to base realistic management decisions.
- Dramatic savings in inventory costs.

This century has seen many technological and other changes. The rate of change becomes more and more rapid. The computer age is a recent one. It is going to produce great changes to existing methods and systems.

Management is only slowly becoming aware of the computer's potential. Initially the characteristics of the computer must be comprehended. Then existing systems must be critically and methodically revised. This process is painstaking and laborious. Systems that have grown piecemeal over many years, to meet continually changing conditions, cannot rapidly be changed.

The initial effort and cost in converting to a computer-orientated system can be great. The potential pay-off, however, is considerable.

Lieutenant-Colonel Limburg graduated from the Royal Military College in 1951 and was allotted to Infantry. He served with 3 RAR, HQ 28 Britcom Inf Bde and HQ 1 Commel Div in Korea in 1952-53. He was Signals Officer and then Adjutant with PIR in 1954-55. An instructor at the School of Infantry for nearly three years he transferred to RAAOC in 1958. After graduating from the Staff College in 1959 he became DAA & QMG HQ NT Comd and NT Director for the Royal Visit (1963), for which he was awarded the CVO. After a period as DOS at AHQ Melbourne he was posted to the UK in 1965 for two years training. This training included an industrial management course at the Manchester University, the Administrative Staff College at Henley-on-Thames, a period at the School of Signals and extensive training on computers at Services establishments. Recently returned, he is now CO and CI at RAAOC Centre, Bandiana.

It was during the period of training in the UK that he prepared his article on British Services Logistics Computers. A study of RAAOC, Royal Air Force and Royal Navy computers and systems, it will be published in three parts.

The aim of this article is to indicate the approach made by the three British Services. Interestingly, each Service has adopted a different approach. Their history, different roles and supply systems prompt such divergence. Comparisons are naturally difficult to make. Each Service considers its approach is the one best suited to its circumstances. This does not mean they are necessarily happy with their present evolution.

Each Service is devoting much effort to designing more adequate computer systems. The analysis and programming of new systems can only be done with highly trained staff. The development of such expertise takes time. The three Services are only just beginning to reap the rewards of all this work. To date their results compare more than favourably with any comparable use by industry. The next few years should see them making even greater advances.

The Australian Army stands to benefit considerably by watching and critically examining developments in this field.

PART I

RAOC and ADP

In addition to the functions carried out by the RAAOC, the RAOC is responsible for supplies, POL, bakeries, barrack services, Army fire service and staff clerks. To do their tasks they have a strength of about 49,700, including 12,143 military. The salaries and wages of this staff amounts to £42 million per year. Their assets total £782 million and their yearly expenditure amounts to £161 million, of which £99 million is spent on ordnance material. This places the RAOC in about fourth position of all businesses in the UK. The largest British commercial company, Shell Transport, has assets of £1375 million. A cutting of the inventory by a mere one per cent would result in a saving of £7.8 million. This sum would purchase 5,500 three-ton cargo vehicles or 9,350 land rovers. Computers should produce savings far greater than this.

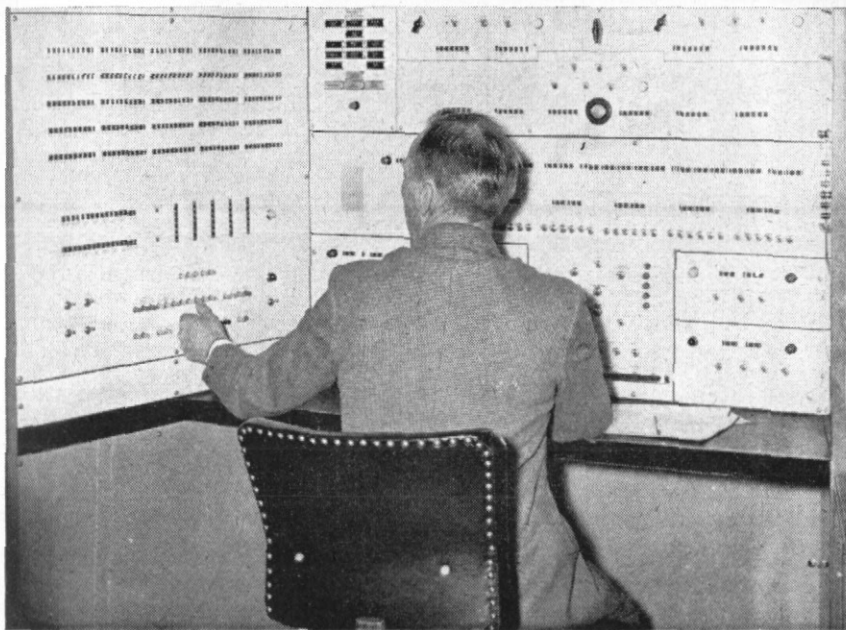
Their fixed assets amount to £82 million. This includes 55 million square feet of storage accommodation, of which 18.8 million square feet is covered and heated. Their yearly activity amounts to 6 million issues (307,000 tons) and 3 million receipts (300,000 tons).

This, indeed, is big business. Any techniques that can be used to reduce these commitments could result in dramatic savings.

The RAOC has three Central Ordnance Depots; at Chilwell, Donnington and Bicester. COD Chilwell holds MT spares and assemblies for the Army and eventually will hold them for the Royal Navy and Royal Air Force. COD Donnington holds armaments, small arms,

radio communications, electronic equipment and their spare parts whilst COD Bicester holds general stores, such as hand tools, tentage and clothing.

The range of ordnance material comprises 567,000 live items. However, this number is almost doubled from the point of view of computer records, because it is also necessary to hold information on obsolescent items. Ammunition information must be kept on batches and lots. Thus the 2,500 natures of ammunition multiply to about 150,000 different batches and lots. Vehicles are controlled by individual registration numbers. Altogether a tremendous accounting problem is posed.



Console operator RAOC ICT 2400

Computers at Chilwell and Donnington

Computers are in operation at both Chilwell and Donnington and their ICT 2400 configurations are identical:

- A magnetic-core computer store with a capacity of 32,678 computer words and a high speed working store of 64 words.
- Auxiliary data storage provided by one-inch magnetic tape held on 2,400 feet reels.

- A total of 19 magnetic-tape units each capable of writing information at a rate of 20,000 characters a second.
- Two Samastronic printers. These have not been satisfactory and are to be replaced.
- A paper-tape reader.
- A paper-tape punch.
- A punched-card reader.
- A card punch.
- A converter which controls the transcription of data from punch cards to magnetic tape and vice versa.

Because of the high operating speed of the computer's central processor and the large volume of data to be processed the maximum use is made of off-line input and output devices which enable data transcription procedures to take place without affecting computing speeds adversely. Thus, input data is transcribed from punched cards to magnetic tape off-line so that information can be fed to the computer at the relatively high data-transfer rates obtainable with magnetic tape. Similarly, magnetic tape units operating independently of the main computer provide data for the punching of output cards and the printing of results.

Each computer is used for about 16 hours a day, five days a week. The daily processes are run on Sunday-Thursday during the night shift from 2300-0700 hours. The weekly processes are run during the day on Wednesdays and Sundays. During the daily cycle the computer may be required to deal with as many as 10,000 input transactions of 138 different types which may affect any item in the file records. In the course of processing these transactions each day the computer will produce updated files of approximately 60 million words, as well as 12,000 printed documents of 67 different types for subsequent action by other branches within each depot.

The number of programming steps in these processes is approximately 85,000.

The Bicester Project

A third RAOC computer is planned to be installed at COD Bicester in 1969. It is proposed that this computer will:

- Control items of general stores and clothing held at Bicester and which represent a stock value of about £40 million.
- Maintain the levels of stocks held at Command Ordnance Depots in the UK. The policy for achieving this will be worked out in co-operation with Command staffs, but a principle of the system will be that the stores held at these depots are for the use of units within the Command and under the direction of the respective Command staffs.

- Control ammunition, to include the functions of receipt, storage and issue and, in addition, the maintenance and analysis of the technical data concerned with inspection, proof, repair and modification records.

In the long term there is a proposal to develop the Bicester computer installation to become the Central Inventory Control Point for the management of all ordnance material including stores, vehicles and ammunition. This should eventuate about the mid-1970s when the economic life of the computers at Chilwell and Donnington has been reached. The system will then operate on the principle of a large computer complex at Bicester tied in with small computers at the other CODs and forming part of a world-wide communication network.

The setting up of this installation is already in hand and the programming teams are working on the conversion.

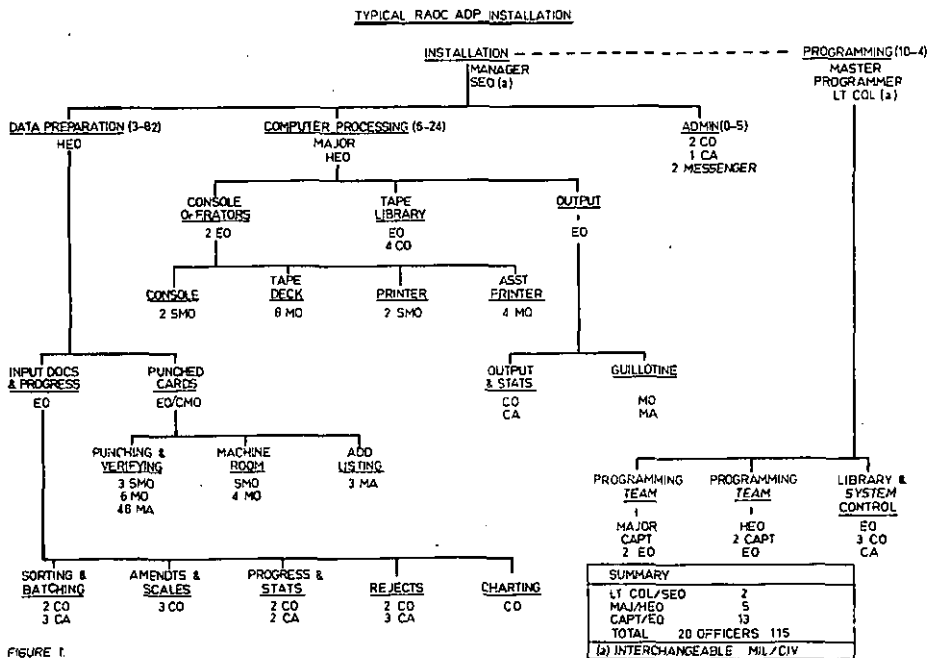


FIGURE 1.

RAOC ADP Organization

A typical ADP installation at Chilwell or Donnington is shown

in Figure 1. The civilian terms correspond roughly to the Army ranks shown below:

SEO	Senior Executive Officer	Lt-Col.
HEO	Higher Executive Officer	Major
EO	Executive Officer	Capt/Lt.
CMO	Chief Machine Operator	Capt/Lt.
SMO	Senior Machine Operator	WO/Sgt.
MO	Machine Operator	Cpl/Pte.
MA	Machine Assistant	Cpl/Pte.
CO	Clerical Officer	WO/Sgt.
CA	Clerical Assistant	Cpl/Pte.

The total strength of such an organization is 20 Officers and 115 other ranks or civilian equivalents. The organization of the Bicester installation is expected to be about the same.

In March 1967 approval was given to the establishment of an Inventory Systems Development Wing (ISDW) at HQ Base Organization Didcot. The draft establishment of this organization, as it existed then, is shown in Figure 2. There are indications, however, that its final establishment will be somewhat different. The role of this unit is fairly self-explanatory.

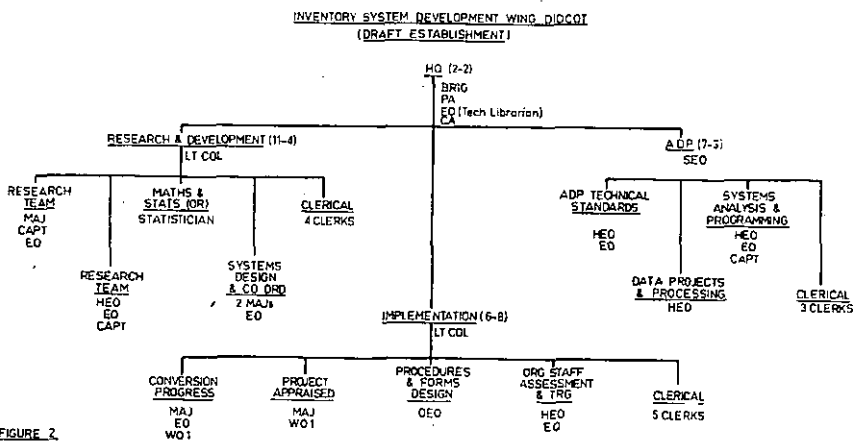


FIGURE 2.

Assuming that the organizations at the three CODs will be identical and that the ISDW will take the form shown in Figure 2, the total RAOC personnel in ADP organizations will be 88 officers and 361 other ranks or civilian equivalents. Of this number about 28 Army officers and 24 civilian officers will require training as systems analysts or programmers.

RAOC Programmers/Systems Analysts

Army and civilian officers are selected for this work by means of

an aptitude test and it is current policy that all RAOC officers will do the tests. Experience shows that these tests give a very good assessment of an officer's potential. The training of these officers normally takes seven months and most of this training is done 'on the job'. However, most officers also attend short ADP courses conducted by the Army, Her Majesty's Treasury or the computer manufacturer.

The conversion of the existing manual system to the computer took an average of two years at each installation and the cost of the staff required to do this was in the order of £108,000 at each location.

Benefits of Existing ADP System

Experience is showing that, as in industry, the computer does not necessarily save staff. But it does result in significant benefits, though it is difficult at present to cost some of them.

FIGURE 3

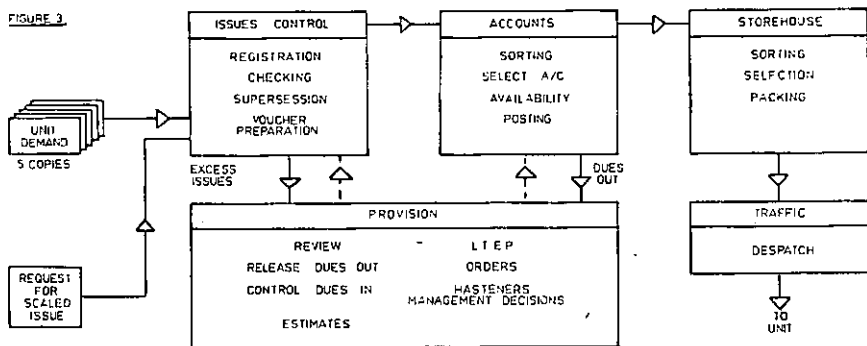
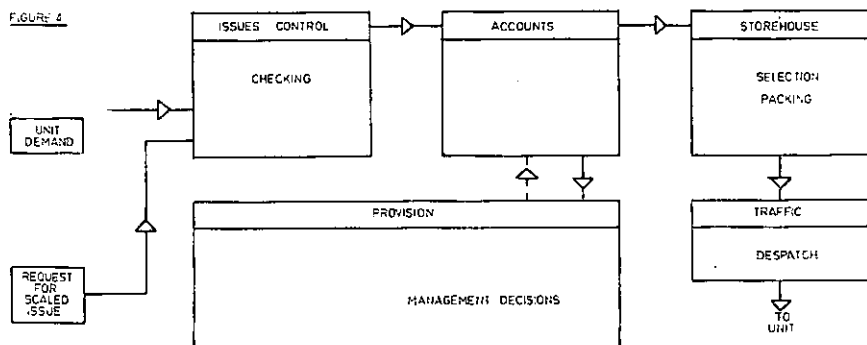


FIGURE 4



A study of Figures 3 and 4 will indicate how the method of making an issue before and after the advent of the computer has

been greatly reduced. Figure 3 shows the old system in simplified form. It shows that a unit had to send five copies of a demand for each single item required and indicates the volume of processing necessary in Issues Control, Accounts and Provision Branches. Figure 4 illustrates the same task after the installation of the computer. The tasks of Issues Control are considerably reduced and the clerical tasks in Provision Branch are no longer necessary. Furthermore, a unit can now submit a multi-item demand and only one copy is required.

Financial savings on initial spares requirements, due to the computer system produced an approximate reduction of £668,000 in the 1966/67 estimates on two vehicle types alone. 'Paper' stocktaking losses were reduced from £60,000 in 1959 to £20,000 in 1965.

The general benefits from the present RAOC ADP system are:

- Improved management.
- Speed.
- Accuracy.
- Some staff savings.

When the Chilwell system was inaugurated it was the largest computer application to stores work in Europe and in many ways was ahead of American practice. It was also the first system in the world which used the computer to calculate the provision requirements in addition to maintaining the account.

The present system is good, it does work and it brings great benefits—but it has deficiencies which in the present RAOC ADP system can be grouped in four main areas:

Management by Exception. The computers are not doing enough of the clerical task automatically and without intervention. The principle of management by exception, which should be paramount, is not. Management effort should be concentrated on that part of the range of stores which is costly and operationally important, at the expense of those stores which are cheap and relatively unimportant. The computers must take on more of the management of the low cost and low importance stores and must do it automatically.

Economics in Supply. Economics in supply is a very important area. It is a question of getting the best value from the money available. It can be achieved by building into the system a lot of specialized, mathematical techniques of operations research. The present system does not have these fairly recently developed inventory control techniques. The effect of including them could well be radical on the inventory levels.

Data Communication. Where the computer cannot manage automatically it must be able to present to the decision-makers all the

relevant information on which to base an informed and rational decision. Included in this information must be the cost of alternatives open to the decision-maker. To do this it is necessary to improve the method of data collection, presentation and communication.

The System Itself. The present ordnance system developed piecemeal over many years. It was added to or subtracted from in order to cope with an immediate problem, without necessarily considering the long term effects. The present methods are inclined to be cumbersome. The system must be simple to use, easily understood, give a better service to the user and it must be efficient. Every part of the ordnance task of material management must be critically examined. Unnecessary and time-consuming procedures must be eliminated and necessary ones streamlined. The workload associated with statutory accounting procedures must be reduced to a minimum. Standard operating procedures must be developed for this simplified system. The Inventory Systems Development Wing has been recently formed to produce such a refined system.

Ammunition, Guided Weapons and ADP

The use of a computer is expected to make big contributions in the field of ammunition and guided weapons, where the RAOC is responsible for storage, inspection and repair throughout the army.

The Bicester installation will be programmed to handle information on ammunition and guided weapons. Some of the areas on which development is taking place are:

- Value engineering — the optimization of design costs and exploiting opportunities for design economics in the product.
- Value analysis — the examination of the post-production behaviour of the item to ensure that economic lessons learned are applied in the future.
- Logistic costs.
- Shelf life.

In the past a heavy cost has been incurred in re-working defective ammunition. Such re-working may be more expensive than adequate design in the first place. In addition it results in loss of confidence and morale and in the worst case, in loss of lives.

Operations Research Techniques

The introduction of Operations Research techniques into logistics, using computers, can improve economics and efficiency substantially, as has been proved, notably in the USA. These techniques include:

Inventory Control Theory
Economic ordering.

Use of probability theory for optimization of spares holdings.
Optimization of contracts.

Allocation Theory

Linear programming.
Activity analysis.

Waiting Time Theory

Queueing theory.
Traffic handling.
Sequencing.

Replacement Theory

Shelf life theory.
Deterioration theory.
Monte Carlo methods.

Competition Theory

Theory of games (including war games).
Bidding theory.

These techniques require the application and use of difficult concepts and the creation of 'models'. The manager of today is called upon to make decisions in three main types of circumstances:

- Where the outcome of his decision is immediately obvious.
- Where the outcome of his decision is probable.
- Where the outcome of his decision is completely uncertain.

In the first case the computer will be used to analyse the facts before the manager makes his decision. In the other two areas a computer can be used to its greatest advantage by producing answers to all the likely alternatives, for comparison by the manager.

The Inventory Systems Development Wing is undertaking the study of these techniques and their use in the RAOC. One of their staff will be a trained Operations Research Officer. Increasingly RAOC officers will need to be trained in the use and appreciation of mathematics, operations research and computers. It is also proposed to use computers in the training of RAOC officers by the technique of 'Simulation'. A logistic simulated, computer exercise is currently being prepared for use at the RAOC School.

New System of Management, Provision and Procurement of RAOC Material

In essence the early RAOC approach to the use of computers was to put onto a computer a manual system, without any large changes in the system itself. The system thus developed compares favourably with other similar systems. However, it does not make use of the true potential of computers.

A lot of effort is being given to designing a new system. This is

still in its infancy and is not yet official policy. It appears, however, that much of it will be implemented. Most of the ideas have been accepted in principle and the feasibility of implementing the proposals is currently being investigated.

In common with other large inventories, notably American, 90% of the value of issues is concentrated in some 10% of the range. It is only sensible and prudent, therefore, to concentrate managerial effort where the money and operational importance lie.

In simplified form the new system is designed to break the inventory into three categories:

Category A Items. These will include all vehicles, ammunition and major equipments — items which are expensive and on which operational effectiveness rests. Items in this category require constant supervision by the staff, by finance branches and by the RAOC. The computer will enable a comparison of assets and liabilities to be made on demand or automatically if a management decision is required.

Category B Items. These number about 150,000 and are items which, although not necessarily expensive or operationally vital, present recurring problems in the field of production, procurement or storage. They require, as often as is necessary, periodic human intervention. The system will provide for period reviews of all stocks in RAOC hands, set in accordance with the inherent qualities of the item.

Category C Items. This is the bulk of the range, over 70% of all items. The items in it are mostly inexpensive spare parts, which behave in a reasonably predictable manner. They will be managed, within pre-determined limits, *entirely by computer* — from provision to disposal, from purchase documents to sales receipts. If any of these limits are broken the computer will call for human intervention and at once present all the facts.

It is in the area of the Category C items where the widest discussions have taken place with staff, finance, production and contract branches. Fundamental changes in long established procedures will have to be made in this area. Some of these changes are:

Breakdown of Financial Estimate. Much greater flexibility of funds between Vote sub-heads, schedules and sub-schedules will be required. This will ensure better utilization of available funds.

New Service and Maintenance Requirements. New service requirements will be integrated into maintenance requirements wherever this is possible. This will reduce the proliferation of small, uneconomic orders.

Economic Ordering. Mathematical techniques will balance the cost of ordering and storage, and may indicate that it is cheaper to buy three years' worth, or alternatively three months' worth. No longer will provision branches be tied to the purchase of a year's supply. Orders to one production or manufacturing source will be drawn together to make a worthwhile buy.

Stock Levels. Mathematical forecasting techniques, only possible with computers, will look ahead at requirements and give plenty of reaction time. Where rules can include confidence limits, defining a particular level of supply service to be maintained, dramatic savings in stock levels can be achieved.

Components of the New System

Components of the proposed new system include:

- Automatic calculation and buying of new requirements.
- Automatic calculation of unit scalings and issue of stores without demand.
- Continuous review of equipment and important operational items.
- Calculation of war reserves and special project items.
- Ammunition requirements and associated technical records.
- Calculation of base repair programmes.
- Early warning of items likely to be critical.
- Material readiness states.
- Long term equipment programme, including financial estimates.
- Census and conspectus of equipment by theatres, arms and formations.
- Automatic handling of routine inventory functions within pre-determined limits.

'NEXT TO PIGEONS'

Furuta, who didn't dare move, knew only too well that civilians in the Japanese Army were regarded with so much contempt that even junior officers hardly tolerated them and sneeringly called them "next to pigeon".

Sitting there, chewing the last of his lunch, Furuta remembered the story officers told over their saki when they classified rank in the Japanese Army. Generals first, of course, then field officers, company officers, non-commissioned officers, privates, houses, military horses, dogs, carrier pigeons — and then civilians.

— Ronald McKie. *The Heroes*

War in the Middle East : An Israeli View

Leo Heiman

THE six-day war which began at 0800 on Monday, 5 June 1967, and ended 130 hours later on Saturday evening, no doubt will be studied for many years in military academies and general staff schools. In that short time, Israel smashed a four-nation military alliance; severely damaged Soviet prestige in the Middle East; conquered territories four times her own size; seized weapons, vehicles, and equipment valued at two billion dollars; and probably changed the entire politico-strategic structure in the Middle East for years to come.

When the Israelis mobilized on 18-19 May, in the wake of the United Arab Republic's (UAR's) military occupation of the Tiran Straits, it was a total effort without precedent in the 1948 War of Independence or the 1956 Sinai campaign. This time, every housewife under the age of 55, and every school child from the age of 12, had an assigned task. Elderly police officers, firemen, wardens, and teachers were called back from retirement to replace those men under 50 who were at the front. Older children filled thousands of sandbags, helped dig trenches, prepare shelters, and erect barricades.

Men over 50, provided they were not drafted for the Civil Defence, Auxiliary Police, or Home Guard, and provided they still had their cars, drove along regular bus routes, picking up passengers without payment, since the bus drivers—and buses—had been drafted for reserve service. High school students replaced the postmen and telegraph messengers.

The trucks of a giant food products corporation continued operating as before, except their drivers wore uniforms and carried rifles. The commercial signs were smeared with mud and grass for purposes of camouflage, and the cargo holds contained ammunition, rations, and explosives instead of butter, flour, and ice cream. Improvisation often replaced routine standing operating procedures. In the Arab

Leo Heiman, an Israeli foreign press correspondent, was born in Poland, studied in the Soviet Union, and fought with Soviet partisan forces against the German Army for two years. He attended Munich University, and went to Israel in 1948 where he served in the army and navy for seven years. He has written several books on military subjects.

The article is reprinted from the September 1967 issue of 'Military Review'.

Armies, administration was military, and when military supply services broke down, there was no alternative or replacement.

Israel differentiated between grand strategy, war strategy, and conduct of operations. Grand strategy—which combined the military effort with political, economic, psychological, and diplomatic campaigns—was the responsibility of the War Cabinet. It was headed by the Prime Minister, and composed of the Ministers of Defence, Foreign Affairs, Information, and Treasury. War strategy—which determined the general course of action, timing, and objectives—was handled by the Supreme Command Council, the chairman of which was the Minister of Defence. Actual command of the armed forces and the conduct of military, naval, and air operations were the responsibility of the chief of the general staff.

Organization of Forces

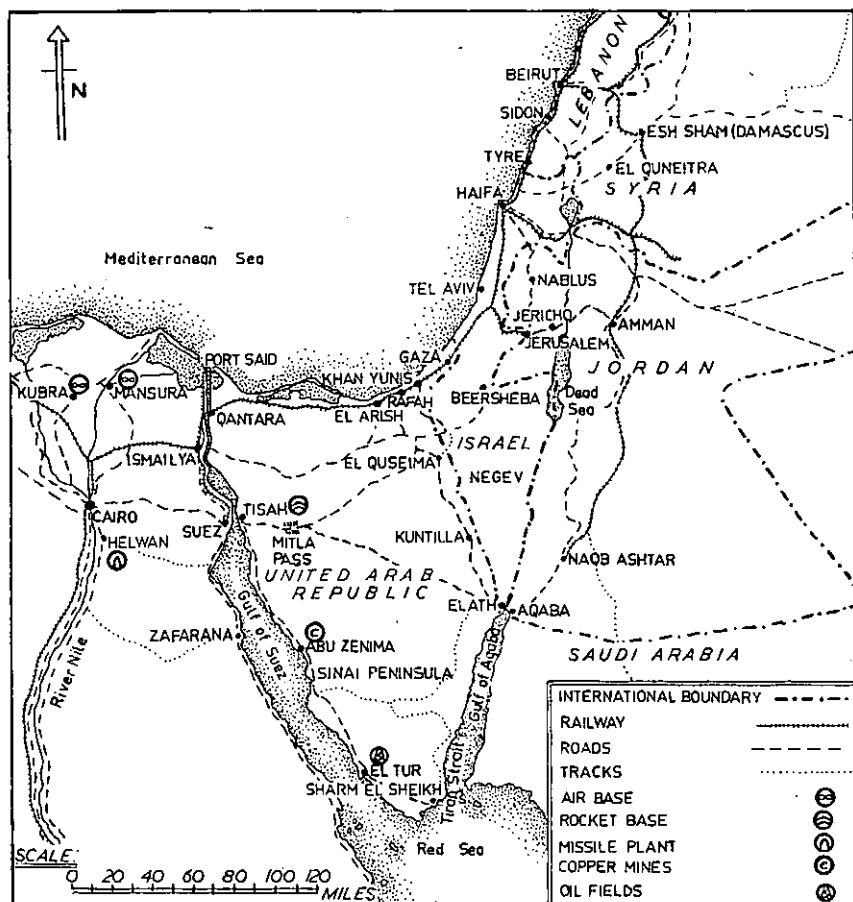
He, in turn, relied on the commanding generals of Israel's three battle-fronts to run their own operations under his watchful eyes. Aerial operations—which played such a crucial role in Israeli victory—and their coordination with the ground effort, were controlled by the chief of military operations and his deputies at every battlefield headquarters. Although the Israeli Army had sufficient forces for a division or even army corps form of organization, it preferred to retain the brigade organization for reasons of mobility, flexibility, and adaptability to changing conditions.

Instead of rigid divisions with intermediate headquarters, the Israelis used the task force, task group, and combat team concept. Such forms of organization were more flexible, permitted rapid transfer of formations from one force to another, or instant shifting of direction, emphasis, and axis of advance from one sector to an entirely different one.

The UAR organization was more cumbersome. The Supreme Commander was President Gamal Abdel Nasser. From him, directives and decisions of strategic nature filtered down through the twin channels of the Commander in Chief, Field Marshal Abdul Hakim Amer, and War Minister Shamas Badran, who headed the administrative-logistic side of the UAR's war effort. Directives were passed on down through channels until they reached division and task force commanders. Little initiative was left to division and, especially, battalion commanders.

In addition, the UAR Air Force maintained its separate channels of command, while the over-all war effort of the four-nation Arab military alliance was controlled by the Unified Arab Command under General Ali Ali Amer.

In Jordan, where King Hussein took over personal command of the armed forces, the original brigade form of organization was retained. Generally speaking, Jordanian military organization was efficient and flexible. But the Jordanian Army lacked reserves, a second line of defence, and, above all, aerial support. When Jordan's 40 aircraft had been destroyed on the ground, the disintegration of King Hussein's armoured and infantry brigades was only a matter of time.



The Iraqi Expeditionary Force was to have operated under Jordanian command, but it was routed before any degree of coordination was achieved.

The Syrian Army's organization is described by experts as very

good. On the eve of war, General Achmed Sweidani, the Chief of the General Staff, took over personal command of Syrian forces on the 'Palestine Front'. Direction was thus both centralized and close to the focal point of events. The Syrians had reserves and not two, but four defence lines. Their ultimate defeat was due to Israeli domination of the air; greater manoeuvrability, and superiority of armoured forces which rolled over the Syrian positions.

Israeli Intelligence Service

There is no doubt that much credit in this remarkable war should go to the Israeli Intelligence Service without which the victories would not have been possible. Strategic intelligence probably underestimated the UAR's capability to fight a war with Israel before the Yemen conflict was solved. It also failed to gauge correctly the full extent of Moscow's involvement in the Israeli-Arab confrontation, but the aerial, naval, and tactical intelligence branches performed faultlessly.

In the first day of the war, the Israeli Air Force would not have been able to destroy 400 enemy planes on the ground in simultaneous raids on 25 airfields unless the pilots knew where, when, and how to catch the enemy air squadrons like sitting ducks. They had to know how to make the low-level approach, from which direction to strike, and—last but not least—which aircraft were real, and which dummies, which airbases were operational, and which bogus, where the anti-aircraft defences were located, and the range, angle, and zone of fire of the weapons.

Soviet Missiles Captured

Soviet SA-2 anti-aircraft missiles had been delivered by Moscow to the United Arab Republic with radar and other equipment. Yet the Israeli pilots knew how to avoid them, and managed to direct Israeli troops to a missile base near Suez. There, nine SA-2's fell intact into Israeli hands, together with launching, guidance, control apparatus, a complete set of blueprints, and operating instructions.

The Intelligence Service's greatest contribution to victory was an operation known as the *Fog of Battle*. This operation misled top enemy commanders, drew them into traps, diverted their forces in the wrong directions, spread confusion and chaos within upper level enemy headquarters, and speeded up the process of demoralization and disintegration of the channels of command.

This was accomplished, in part, by announcing the capture of towns and strategic areas only 24 hours after they had been seized by Israeli forces. The capture of some was not announced until the

war was over. Thus, Arab planes continued to land on the El Arish airfield for many hours after the airbase had been occupied by Israeli troops. The pilots saw the UAR flags still flying from the masts, and permission to land was granted by the control tower in Arabic with an Egyptian accent. No one mentioned that El Arish was in danger of being captured by the Israelis despite the fact that it had been seized many hours before.

Indeed, the *Fog of Battle* operation made it appear as if victorious UAR forces were advancing toward Tel Aviv. By listening to Israeli military communiques, Arab commanders received the impression that the Israelis were desperately defending their Negev settlements and Gaza Strip villages, whereas, by this time, they were deep behind UAR lines in the Sinai.

In Jordan, an Israeli armoured task force seized the key city of Nablus without encountering enemy resistance. Actually, citizens greeted the Israeli tanks which were believed to be an advanced column of the Iraqi Expeditionary Force racing toward Nablus. The Iraqi force had been intercepted and defeated, but, since no mention of it was made on the Israeli radio, the Jordanians assumed the relief force was coming up to Nablus as scheduled. The Israelis had entered the city from the east, using the route the Iraqis were expected to take. The Jordanian forces, entrenched west of town and facing the direction of the expected Israeli attack, were overrun from the rear and defeated.

Also in Jordan, the Israelis did not announce the capture of Jericho. Because of its historical, religious, and emotional associations, Jericho would have made front page banner headlines throughout the world. This was especially true since the unit which seized it was headed by an officer named Joshua. But Jericho is also the key strategic junction where all roads converge before crossing the Jordan River to Amman. The Israelis learned about its capture 48 hours later, when the radio announced the formation of a military government to police the occupied territories, including the Jericho district. Meanwhile, Jordanian Army units retreating to Amman, via Jericho, were rounded up by Israeli ambushes and roadblocks.

Israeli Equipment

Israeli equipment ranged from ultra-modern to homemade improvisations. Since the war was a total effort, taxicabs fought side by side with tanks, city buses were utilized as personnel carriers, and slow executive aircraft flew with supersonic jets to blast enemy targets. Relics of World War II, taken out of junkyards and given a new coat of mud, fought side by side with *M48 Pattons* and *Ben-*

Gurions which were British *Centurions* with a new 105-millimetre, long-range cannon.

All attempts to standardize equipment were given up, and an Israeli task force utilized up to 10 different types of tanks including *Pattons*, *Ben-Gurions*, regular *Centurions*, AMX13's, several types of *Shermans*, and captured T55's and T34's. Artillery weapons included at least seven different calibres and four different nationalities.

The biggest surprise of the war, equipmentwise, was the capture in the United Arab Republic and Syria of computer-operated, long-range Soviet 160-millimetre cannon. The Israelis did not realize such guns existed. They knew the Soviets had supplied 160-millimetre mortars to the United Arab Republic and Syria, but not even Red Square parades in Moscow featured 160-millimetre cannon. The long-range batteries which were overrun and seized intact by Israeli paratroopers, both in the United Arab Republic and Syria, must have been delivered only a short time before since all manuals and operating instructions were still in Russian, and no Arabic ones had been printed.

Each Israeli column had enough organic transport to carry a 72-hour supply of fuel, ammunition, and spare parts. If a unit was in battle for more than 72 hours, additional supplies were airlifted by transport planes and helicopters. Each column was accompanied by mobile maintenance units composed of city mechanics drafted for war service, together with their recovery vehicles, winch trucks, and workshop instruments. Every reservist who had a car was encouraged to bring it along, with the result that among the first vehicles to enter El Arish was a red Mustang.

On the other hand, the Egyptians, Syrians, and Iraqis utilized standard Soviet equipment while the Jordanians used United States and British equipment.

Strategy and Tactics

Israeli doctrine had undergone many changes since 1956, but its essentials remain the same: psychological shock which stuns the enemy command, unexpected moves at unexpected times in unexpected directions, freedom of decision and fullest operational initiative to commanders in the field, and constant pushing without rest or intermissions. From the moment the Israeli forces moved into action, officers and men did not pause for sleep until the war was over.

The Israeli battlefield commanders were given great leeway in planning their own strategy according to the broad outlines of the general staff's war plans section. On the southern front, an armoured task force would assault UAR positions frontally, and gnaw its way through multiple defence lines by sheer weight of armour and firepower. This was a striking departure from the usual Israeli strategy

of indirect approach. The moment a gap was punched in enemy lines, armoured forces poured through it to fan out in several directions. They linked up with combat teams from other task forces, which broke through enemy lines in a different sector, for an attack on another UAR position. In this way, all major pockets of resistance were attacked and crushed, while mobile forces of paratroops, armoured infantry, jeep commandos, and tanks raced for the Suez Canal.

The success of Israeli fanning-out strategy was made possible by complete domination of the air. The Egyptians took great care to protect their flanks because they expected the Israelis to repeat their encirclement moves of 1956. They did not expect frontal attacks against the centres of their fortified positions.

On the central battlefield, the Israelis were not prepared for offensive operations. They had to improvise an *ad hoc* strategy the moment Jordan joined the UAR-led military alliance and attacked Jerusalem and the Tel Aviv coastal strip. General Uzzi Narkiss admitted that he did not expect the Jordanians to join the war against Israel. Their attack near Tel Aviv occurred as the parachute brigade was boarding transport planes for an airborne mission behind UAR lines in Sinai.

The paratroopers disembarked from the planes and were rushed in a long convoy of city buses to Jerusalem. An armoured brigade came up to reinforce them. Regional defence units and reserve infantry battalions were hastily organized into combat teams, and the northern battlefield helped out by sending in a force to roll up the exposed right flank of Jordanian defences. It required another five hours to seize the strategic and operational initiative from the enemy. At dusk, the first gaps had been punched through Jordanian lines, and Israeli tanks began pouring through to seize strategic ridges and road junctions in the enemy rear.

On the northern battlefield, the strategic situation was different. The ruler-straight border had the flat Israeli Plain on one side, the lofty Syrian ridges towering on the other side, with the deep gash of the Jordan River in between. The Syrian flanks were protected by the snowcapped Mount Hermon Range in the north, and canyon-like Yarmuk Valley in the south. All of this precluded anything except a direct assault up the slopes, under heavy enemy fire, across minefields, barbed wire, and multiple lines of fortifications.

Israeli strategy here was based on the twin factors of attrition and surprise. The first was achieved by incessant aerial and artillery bombardment for 100 hours; the second by tactical moves and clever operational ruses. The Israeli sledgehammer drove a few thin wedges which expanded as they penetrated enemy territory until the pincers could close on flat terrain suitable for armoured operations.

Israeli tactics evolved in the 1948 War of Independence and the 1956 Sinai campaign, as well as in border battles, punitive expeditions, and retaliation raids. Tactical doctrines in the past two decades were greatly influenced by three men. General Yigael Yadin, Chief of Military Operations in the 1948 war and Chief of the General Staff in 1949-51, evolved the triple concept of outflanking, bypassing, and surprising. General Moshe Dayan, who headed the Israeli armed forces from 1954 to 1958, is credited with the 'assault by willpower' theory, which stresses that all officers, no matter what rank or which position they hold, must, at all times, move in front of their men, setting a personal example for the troops.

General Dayan dismissed the prevalent theory that a general must direct his troops from headquarters in the rear by stressing that, if his battle plans are sound, the troops will move with the precision of a well-oiled mechanism. Any unexpected changes, reserve moves, or coordination can be handled by executive officers, operational staffs, and personal radio contact. Even brigade commanders must spearhead the assault, and this principle is obeyed down to rifle platoon and section level.

'Human Steamroller' Tactics

Another aspect of the 'assault by willpower' theory is that, when fighting starts, officers and men go without sleep or normal food for days until the enemy is crushed. There are no field kitchens. The doctrine assumes that no army can stand fighting for 24 hours a day for several days. One side is bound to break, and the army with the stronger willpower wins.

General Itzhak Rabin, the present chief of the general staff, evolved the 'human steamroller' concept. Arguing that victory is not complete until the enemy has been crushed, he trained the troops in frontal attacks on fortified positions, fighting largely with sub-machine-guns, grenades, and demolition charges. Israeli tactics in the 1967 war were a synthesis of the Yadin, Dayan, and Rabin concepts.

In defensive deployment, the current tactical trend is to have the forward lines as lightly manned as possible, under the circumstances, preferably relying on armed settlers in border villages and regional defense units in other planes. The operational forces are held back for a decisive counterstrike.

In offensive deployment, the trend is toward the heaviest concentration of manpower, firepower, and armour at decisive breakthrough points, even if this means temporarily denuding other sectors of the battlefield and taking great risks. Great leeway is granted to the individual initiative of commanders who are permitted to use their own judgment.

Mobilization Rate

The war's outcome hinged on each side's ability to tap its economic, industrial, scientific, and manpower reservoirs. Israel, with a population of 2.5 million, was credited with having 250,000 to 300,000 men and women in her armed forces during the recent war. Even if the lower figure is accepted, the over-all mobilization rate appears to be 10 percent, which is one of the highest in the world.

The Arab military alliance had a population of 60 million. If it had mobilized only five percent of the total, its three million soldiers could have crushed Israel by sheer weight of numbers. But for social, economic, educational, organizational, and other reasons, the Arabs have not been able to mobilize more than one percent of their manpower resources. The over-all figure of Arab soldiers committed to war against Israel in 1967 was, in fact, only 300,000 which was one-half of one percent. Thus, despite their vast numerical superiority on paper, the Arabs did not enjoy actual superiority in the field.

Material resources must also be analyzed in the retrospect of theory and practice. Israel's 2.5 million citizens had the same total gross national product in 1966 as the UAR's 32 million people. And Israel has more industries, laboratories, and scientific research centres than all Arab nations. Israeli economy was geared for a sustained total war effort. Israel had more merchant ships, tankers, and airliners than all Arab nations and thus more qualified mechanics, engineers, technicians, navigators, and communications personnel. Sheer size is not necessarily decisive. Qualitative factors more than made up for the difference in total assets.

There is little doubt that morale determined to a great extent the outcome of the Israeli-Arab war. For the Israelis, defeat and surrender were tantamount to national and physical extinction. Arab leaders openly and repeatedly declared that their aim was to wipe Israel off the map and drive her population into the sea. This generated such fighting spirit on the Israeli side that hardened veterans disobeyed orders that kept them away from frontline combat. They fought with desperation, determination, and unprecedented ferocity because they fought on their own doorsteps. Rationally, this was a more tangible war aim than honour, ideology, or abstract nationalism.

The politico-psychological impact of the Israeli victory on the Middle Eastern and global scene is probably much greater than the military one. The Middle East, the Arabs, and the Israelis themselves will never be quite the same after those six days in June 1967. □

Engineers in Counter-Insurgency: A Different Approach

*Major F. J. Cross,
Royal Australian Engineers*

Introduction

IN the counter-insurgency environment Australian forces are most likely to face, one of the most important contributions to an effective civil affairs programme will be military civic action. Although, in its broadest sense, military civic action is a responsibility of every soldier, it is the specialist who will provide the greatest return from a short-term investment.

In South-East Asia the most valuable investment is the tangible, quickly completed civic action project. The public works project in particular provides material improvement to economic and social conditions. This in turn will have a beneficial effect on the hopes of the local population and its attitude towards the established government. Furthermore, the desire to preserve the new work should encourage the creation and maintenance of effective self-defence measures.

Civic Action and the Engineers

More than any other corps the engineers can provide the most effective assistance in the material aspects of civic action. No new engineering skills are required. Only the working environment changes. In addition to construction skills, the engineers possess other valuable advantages. Their instructional experience provides opportunities for them to impart basic skills to others more readily and easily. Their military training provides an understanding of the problems of local protection and defence and a sound background knowledge of health and hygiene.

Major Cross graduated from the Royal Military College in December 1956. He attended the Royal Melbourne Technical College (1957-58) for his Diploma in Civil Engineering. Postings to 21 and 23 Construction Squadrons followed. He was GSO 3 DMO & P AHQ (1961-62) and then Interchange Officer USARPAC (Hawaii) until his posting to 7 Fd Sqn in January 1964 (OC in March). Major Cross attended the 1966 Course at the Australian Staff College. Since January 1967 he has been an instructor at SME.

The Current Concept

Currently the engineer squadrons provide the only source of skilled manpower for the implementation of public works programmes. This concept raises important questions. For example (i) Are the engineer squadrons adequately trained to undertake such tasks for the maximum gain? (ii) Will the effort be available for the duration of the project? The answer to both questions must be No.

The engineer unit possesses the technical and basic military skills and the administrative backing for such work. It lacks, however, particular skills such as language and comprehensive area familiarization, essential for effective civic action.

In counter-insurgency operations, particularly in undeveloped areas, very heavy demands will be made on available engineer effort for purely military tasks. It will be a rare occasion when technical manpower can be released for civic action. Again the diversion of committed effort from an incomplete civic action project, because of an urgent unforeseen military requirement, could have a disastrous effect on civil affairs as a whole.

Our army possesses a very small engineer capacity when considered in the light of our commitments. Clearly it would be unwise to plan on diverting portion of this limited capacity to civic action, no matter how important the particular project may be. A new line of approach is required.

The Requirements for an Effective Civic Action Capacity

What are the prerequisites for an effective specialist military civic action capacity? As far as we are concerned the most important considerations are:

- Manpower. We can ill afford to divert manpower from essential military duties. Any element intended for exclusive employment on civic action projects would need to make very small inroads into our regular man-power strength.
- Competence. The sensitive nature of civic action work calls for high standards of professional ability, intelligence and all-round proficiency from those involved. Proficiency in the local language and a thorough understanding of the area concerned are also necessary.

The Specialist Team

There is a definite need in our army for specialist civic action elements. A small, thoroughly trained civic action team could provide a contribution to counter-insurgency operations out of all proportion to its size.

What form should such an element take? I suggest that the best solution is a small lightly equipped, self-sufficient team. Although the

equipment holdings should be kept to a minimum, they should be commensurate with the team's technical capacity. The team organization would be:

Officer-in-Charge (professionally qualified)	—	Captain	1
Clerk of Works (Construction)—		Warrant Officer	1
Construction Specialists	—	Carpenter & Joiner	2
		Plumber and Pipefitter	2
		Bricklayer	1
		Blacksmith/Welder	1
Team Specialists	—	Plant Operator	2
		Electrical Mechanic	1
		Mechanic	1
		Medical Orderly	1

As far as equipment is concerned the scaling must be such as to make the team self-sufficient and allow it to function within its construction capability. Some reliance must be placed on local resources for such specialist equipment as engineer plant. In addition to tradesmen's kits and other selected construction equipments and stores, the team would need to carry weapons and ammunition, accommodation stores, medical stores and necessary general stores. To be fully mobile the team would require about five vehicles.

Selection of Personnel

Stringent requirements apply in the selection of suitable personnel for such teams. The team would be expected to operate in comparative isolation, in a primitive and *potentially hostile environment*. They would be subjected to morale and psychological pressures different from those applicable in conventional organizations.

Training

Training for the civic action specialist would need to be thorough, extensive and set against the background of the most likely area of operations. With thorough cross-training in trade and other special skills the team's work capacity and effectiveness could be improved well beyond that of its trade composition.

Because of the peculiar nature of the work, training and general preparation of the team would need to satisfy the following essential requirements:

- Language. One of the keys to the problem, language training to a predetermined standard must be the priority consideration. The course need not be long. An initial period of intensive

schooling to conversational standard would be necessary. Proficiency could then be developed with continuous practice and usage throughout the remainder of the training period.

- Versatility. Each man should be trained to acquire, as a minimum, proficiency in at least one skill other than his own. For example, a carpenter should be able to perform an electrician's or plumber's basic duties if the occasion demanded. A man trained in only one skill would have no place in such a team. Improvisation would be the rule rather than the exception. Consequently ingenuity in the use of locally available materials would need to be encouraged and developed.
- Country Familiarization. This would include geography, the political and economic structure of the country involved and local materials and construction methods. Emphasis would need to be placed on the laws, culture, customs and problem areas of the local population. An indoctrination period in counter-insurgency would also be desirable.
- Military Training. Additional military training in special techniques would be necessary. These would include village defence, communications, escape and evasion and survival training to name a few.
- General. Each team member would need to be proficient in first aid and have a basic knowledge of the health problems of the particular environment. He would also need an understanding of instructional techniques.

Employment of the Specialist Civic Action Team

Having been thoroughly prepared for its role, how should the team be employed?

In the simplest circumstances the team would be part of an Australian force assigned to a particular area or zone of operations. It would be employed under the force commander's direction in accordance with pre-determined national policy guide-lines. Its specific task areas would be allotted in the light of overall civil affairs policy. Of necessity the team would work in very close co-operation with the force Civil Affairs section and designated local government authorities.

After receiving its directive the team would then be ready to carry out the work. Once committed to a specific project or task area, it should not be interfered with except in abnormal circumstances. In the execution of the work the team would aim at achieving maximum local participation. Its task would be to assist, supervise and advise rather than complete the work itself.

Effective employment of the team would not be limited to the circumstances depicted above. Its capability is such that it is admir-

ably suited to independent cold war tasks as well. Properly controlled such a team would be a valuable asset to Australian standing in any one of a number of undeveloped South-East Asian countries. There are additional problems, however, in this form of employment. These would have to be analysed on the political level and feasibilities determined.

The team as proposed is a complete entity. It should not be split and employed in separate smaller elements. Its effectiveness would depend on its remaining intact.

Finance

Special mention must be made of the finance problem. Without access to project funds or construction materials the team would frequently be rendered inactive. Before committing the team it would be necessary to ensure that arrangements are made for the provision of adequate project funds or construction materials.

Conclusion

Engineer works, by their very nature, usually please and seldom irritate. In undeveloped countries engineer service is urgently needed, gratefully accepted and rarely resented. It can be the goodwill key to many doors.

Our present division is the result of a great deal of experience and thought. At minimal cost to the army as a whole, its capability could be further enhanced by the inclusion of a small number of Specialist Civic Action Teams

TPNG ACADEMY'S FIRST ENTRANTS TO PORTSEA

An Army Academy established last January at the Goldie River Army Depot, near Port Moresby, has produced its first four entrants to the Officer Cadet School at Portsea, Victoria.

They are Sergeant John Lytus, from Buka Island, Bougainville, Lance-Corporal John Sanawe, from Aitape in the West Sepik District, Lance-Corporal Gago Maipakai, from Baimuru in the Gulf District, and Private Tom Poang, from Lae in the Morobe District.

The four men will leave the Territory in January next year to begin an intensive and rigorous course lasting 44 weeks at Portsea. A fifth man will join them for the Portsea training course. He is Mr Lima Dotaona, a Papua and New Guinea University undergraduate. Mr Dotaona is from Misima Island in the Milne Bay District.

The Commander, Papua-New Guinea Command, Brigadier I. M. Hunter, said that he had every confidence the five men would graduate.

— Dept. of Territories Papua and New Guinea Newsletter,
14 December 1967

The Truth about Blivets

Lieutenant-Colonel D. J. P. Tier
Royal Australian Artillery

Operation BLIVETS really began one day in 1961 when the Chief of ORDNANCE (Office of the Research Division for New and Novel Childish Experiments) called his Heads of Section together and addressed us thus:

'Gentlemen, the Minister has given ORDNANCE a priority task. Due to the proliferation of committees in Government the problem of writing, storing and gaining access to minutes has become a major task. According to the most recent estimate prepared by SCAMP (Select Committee About Ministerial Pronouncements) by 1983 a 50% increase in the Public Service will be needed to cope with the additional records alone. The effect on the country can be imagined and is almost too dreadful to contemplate. Taxes will rise, production will fall and, unless there is a dramatic increase in the birth-rate, the economic fabric will disintegrate and Communism will flourish.

'So you see, gentlemen, we are faced with a problem of the greatest importance to our nation and one which will tax our powers to their utmost. Need I add that we must exercise the greatest discretion so that the public should not become alarmed, but we must act with all expedition if the dire consequences which have been predicted are to be avoided. After all, 1983 is only twenty-two short years away.

'I have already discussed the problem with the Minister, and with some of you, but I wanted to brief you all together since it seems clear that this project will draw you all in at some time or another. I have appointed Threnody the Project Officer. He will have direct access to me at all times and I expect you to give him your fullest co-operation. He and I will meet from time to time but I expect a weekly progress report from Section Heads at the Co-ordinating Conference so that we can all keep in the picture. I will now hand over to Threnody who will outline his proposals — Threnody!'

Threnody was just the man for the job. He is a mature, incisive thinker who is very quick to grasp the essentials of any problem but with such wide experience that he does not overlook the details either.

Lieutenant-Colonel Tier began his army career in 1941 as a lieutenant in RAA (M) (Hy) and continued to serve with artillery units until the war ended. After a period on the R of O he served in the Interim Army (1951-52). A Bachelor of Economics he has, since 1952, occupied a number of technical and scientific posts including Trials Officer Missile Section LRWE Range and duty with the Ministry of Supply while attached to AAS (UK). GSO I SAMB from November 1964 to March 1967 he was then seconded to Dept. of Defence for duty with Combat Development Test Centre Bangkok, where he is still stationed.

'Thank you, Chief. Well, gentlemen, this surely is a problem. I have thought about it a great deal and its ramifications seem to widen the more I think about it. My immediate solution to the problem was that we could reduce minute-making by reducing the number of committees but, on deeper consideration, I realised that we have so lost the power of decision-making by individuals that such a simple remedy could not be effective until a whole new generation of top-people had been trained and installed. I suspect that this solution would create such an upheaval that the cure might be worse than the disease.

'What I have decided, therefore, is that we should look at all the possible alternatives and assess their effect on the social structure overall, a proper systems analysis approach, and from these alternatives recommend the most suitable. In the course of our investigation I realise that not all the data we require will be readily available and some field work will be needed. Again, because of the vast amount of data which exists we would only be able to sample here and there and we shall have to extrapolate over the remainder. We shall need a model and we will almost certainly need a computer of our own.'

At this stage the Chief broke in, as if to anticipate the question: 'The Minister telephoned me just before the meeting to say that he had Cabinet's approval to spend up to \$100,000 on a computer as long as we could satisfy him on the requirements.'

'Oh, that's excellent, Chief. So there we are, gentlemen; the problem can be thought of in the following way — Systems Analysis, Operational Research, Modelling — and, of course, Co-ordination. The Chief has given me Dirge of Mathematics to look after the computer question but the Heads of the other Groups will have to be recruited specially. I shall be off in a few days for a brief visit to research establishments around the world to see who is offering. I expect to be away about a month and in the meantime the Staffing Branch will be filling up the slots at the working levels. I hope to have a small but effective staff of about fifty professionals by the time we get fully under way in about a year.

'That's about it, gentlemen, so if there are no questions and unless you have anything else, Chief, I suggest we adjourn until next week.'

That is how it was at that first meeting. In the six years between we have developed into a dynamic team. Threnody is now Program Director, Dirge has his computer and is in charge of Modelling, Knell has taken over Systems Analysis and Lament, with a team of Hansard reporters, is doing the Operational Research work. All has not been plain sailing and you will be interested to hear some of the problems which have beset us.

For example, there were so many computers available that, even though Dirge began work immediately, it was two years before he

could clearly establish his requirements, decide on the computer he preferred, after a world-wide search, and have it installed in its own specially air-conditioned environment. Even so lots of strings had to be pulled with, finally, Cabinet directions as to priorities. The ultimate cost was \$1.5m and the need for such expenditure was questioned in Parliament; the Government only managed to survive a vote of censure over its whole handling of the matter by severely disciplining some of its wayward members.

Dirge has, so far, developed a crude model which has been used successfully to give limited results. The idea is to apply some of the proposed remedies to the model and measure their effectiveness. The preferred remedy should of course be that which produces the greatest effect at the least cost. We have not yet determined what is the effect we seek exactly and the estimation of costs has so far eluded all of our best administrators; they do not seem to be able to agree upon such matters as overheads, hidden charges for rent of space to store minutes and amortisation rates for equipment to replace minute-takers. In the meantime we have been progressing more or less satisfactorily by making assumptions about all these things and estimating the sensitivity of the system to the various inputs. This is all in line with Threnody's prediction that not all the information that we should need would be available and a small sub-group, under Whimper, has begun practical work to validate the model and to avoid that complaint common to computers, GIGO (Garbage In -- Garbage Out).

Lament recruited about one hundred Hansard reporters, not to take the minutes of the many committees but to observe the minute-makers and the minute-takers at work and estimate the value of the minutes overall. One of the problems they encountered, which is familiar to all operational researchers, is that they found themselves becoming part of the experiment. The effect on conferees of knowing that the value of what they said and how accurately it was reported was being assessed, possibly for the first time, was most inhibiting. The numbers needed for this task alone far exceeded Threnody's original estimate and, since the requirement could not be met in-country, Lament, too, had to make a world pilgrimage to seek staff.

There were some interesting by-products of this sudden demand for Hansard reporters. Legislation everywhere was slowed down, international tensions eased since deliberations on the contents of notes to be exchanged were inhibited and, of course, the pressures to develop a replacement for the Hansard reporter increased. These latter pressures were just the stimulus that ORDNANCE needed and the response was magnificent; a new group, under Wail, was established to examine electronic alternatives.

It might be expected by the layman that a simple tape-recorder would be enough but in ORDNANCE we like to do things properly

and a careful study of the problem showed that it could be made much more difficult. A tape-recording, like a minute, only records the spoken word but it is well-known that much of what is spoken or written is redundant (was there some comment from the reader?) and, if compression is the aim, this redundancy should be removed if practicable. This is the realm of the communication specialist and Wail, following an extensive world tour, has an active group of about twenty of the world's best men attacking this problem.

Their approach is most interesting and a fine example of what such research can accomplish. They have shown that in any passage, spoken or written, certain values can be assigned to words. The value depends on the meaning which a word has in that particular passage as well as its position in the phrase or sentence. These vary from speaker to speaker but once the style has been established it is possible, using a binary code, to drop out of any passage the redundant words and still retain the meaning. (This pre-supposes that there was meaning there to begin with, but meaning is a topic outside the scope of this paper.) Compression to about 90% of the original has already been achieved and compressions to 60% are confidently predicted.

Knell has been quite an acquisition; he was Reader in Statistical Analysis at Leyden University when Threnody recruited him. Apparently it was quite a task to woo him from Leyden but Threnody finally hooked him by appealing to his international spirit when he stressed the dire consequences to the world of failing to check the multiplying minute-making menace.

Knell's group, recruited personally by him on his world tour before taking up his appointment, is smaller than other groups but very professional. There are eight Ph.D's out of his ten — and the other two are on leave to complete their Doctorates. As Knell is so fond of pointing out, Systems Analysis is the very core of Operation BLIVETS. He says: 'Each problem, based on the proper consideration of the facts, has a solution which it is our task to find. The other groups establish the facts; we work them over — the facts that is! Regrettably, one can never be certain that one has all the facts which relate to a given problem and so, even if we massage the data correctly, we must always be sceptical of the result. On the other hand, the too laborious searching for data can so delay the solution to a dynamic problem that the result may no longer be relevant.'

With this philosophy in mind, and Knell repeats it frequently at meetings and to visitors to ORDNANCE, he has imbued his team with a sense of urgency which can only be described as ulcer-producing. A good man Knell but the job may be the death of him.

Over all this, Threnody has presided and co-ordinated with the verve and efficiency that was expected. His hope that he would have a small but dynamic staff was not fulfilled but he has successfully managed the growing numbers, albeit that he has had to set up an

administrative group under Mourn. This group has been a great help to us all; they have successfully battled with the Establishment and gained us our own pension scheme and promotion system; furthermore, they have introduced a costing system so that all aspects of our work can be correctly charged — this is absolutely vital information for the new Budgetting Section. Currently they are engaged in discussions with our architects about the design of our new building. Threnody is very taken with this idea and has set up a 'Building Design Proposals Committee' to consider the requirements of each of the groups, both now and to allow for our future planned expansion. Interestingly enough one of their first main tasks is to find a euphonious name for the committee — after all who can pronounce BDPC.

Dirge is particularly pleased with the prospect of the new building since he will get a new computer out of it. He has outstripped the capacity of his old one and despite the expense, because he has now become world-renowned, the Establishment has agreed to provide a new one rather than lose him at this critical stage.

And so we proceed, an advance here, a set-back there, as the full scope of the problem is revealed. Extra staff, extra space and the growing administrative problems which follow seem to take up an increasing amount of everyone's time but the sense of dedication of the old hands never falters. Unfortunately, an insidious element has arisen in our ranks; there are those, generally among the more recently recruited, who, neither appreciating our long tradition nor realising the menace which the unchecked growth of minute-making represents, point to the fact that Operation BLIVETS, if not itself checked, will cause a 25% increase in the Public Service by the year 2000. Fortunately Threnody, brilliant man that he is, had already foreseen this possibility and has established the nucleus of a sub-group on Organization and Methods. This sub-group reports to him direct and is charged with the responsibility of assessing our own growth and making recommendations about our future organization. It will develop a model and is taking over Dirge's old computer, when it becomes available, and Threnody leaves shortly for an overseas visit to recruit a suitable man to put in charge.

Finally, to complete the record and in case you have been wondering how operation BLIVETS got its name. It is a tribute to Threnody's great mind again. At our second staff meeting the question arose about a suitable title for our operation; it was agreed that a mere code-word would be too undignified, that it had to be meaningful, succinct and, of course, an acronym. Threnody's proposal which was put forward at the next meeting was accepted unanimously and enthusiastically — Binary Language Ipsissima Verba Experiment To Summarize. Unfortunately, this had degenerated in the vernacular so that a 'Blivet' is now often described as 'a pint pot to hold a quart of nonsense.' □

Concerning the Big Stick

Major-General Sir John Gellibrand, KCB, DSO

IN the beginning of war the first soldier was a man, and recruits are still mostly raised from this class.

Whatever concerns and affects men as individuals, such also concerns soldiers; and the unit is both the sum total and the average of the soldiers in it.

Soldiers are men of goodwill, the others are but men in uniform whose health concerns us not. The goodwill of a soldier is not perfect but imperfect; not constant but varying. It is like the sea, it must rise or fall, obeying the impulse from Up Above.

As the master so the man; as the leader so his unit, subject to power and latitude of action allowed, to the example of his neighbours and the standards exacted and aimed at by Up Above.

For this is true that soldiers live and work only in the belief that up above reign fairness of action and thought, insight into character, and accuracy of judgment no less than energy, ability and decision. Goodwill below believes in practical infallibility Up Above.

Now Up Above is never all powerful nor is it permitted to explain that the things it would do, those it cannot always do; and this is a sore hindrance, since the more allowance goodwill makes on this account, the more severe is the strain to believe in Up Above systems when cause for criticism arises. The fullness of belief that was originally is the measure of the resulting discredit.

To Up Above are entrusted the weapons of reward and displeasure whereby the lowest standard to be accepted is maintained and the highest standard to be aimed at is outlined. Yet those who wield the weapons find that they are surely double-edged and a danger to him

Major-General Sir John Gellibrand was a Tasmanian who, after graduating from Sandhurst served as a company commander with the South Lancashire Regiment in the South African War, later with the Manchester Regiment and on the staff in Ceylon until he resigned from the British Army in 1912. During the First World War he served on the staff of the 1st and 2nd Australian Divisions on Gallipoli; commanded the 12th Battalion for several months at the end of that campaign, and the 6th and 12th Infantry Brigades and the 3rd Australian Division in France during 1916-18. He died on 3 June 1945.

who draws without skilful care and upright intention. Many a one has said to himself, I will not be content with less than this, and awoken to find that none will ever give him more.

Ambition is an infirmity that knows no cure and there is never a sufferer who wishes to be cured. Slow advancement maketh the heart sick, rapid promotion causes the head to swell, and to hold the balance even taxes the ability of Up Above. If the latter cannot discriminate between the mover in the background and the bluffer in the foreground, goodwill loses ground, for there is no defence for a bad promotion any more than there is for retaining a leader who does not and cannot lead.

Though promotion be a mighty weapon affecting life and death, success and failure, ease and discomfort, yet it is close followed by rewards. It is not possible for the mind of man to fathom the reasons for all awards; it is essential that he should realize the general value of those which concern him. If a hundred soldiers receive medals and one is known to be unworthy, ninety-nine medals have been wasted. None are so poor in spirit that they desire to eat butter out of a dog's dish.

The fear of displeasure is the fence which marks the road to be followed and is alike honourable to him who fears and him who is feared as soldiers. Such fear is just and certain, wherein neither chance, caprice nor favour have any part. To prate of love in war is mere wind, for he who loves best fears most and is most feared. Many have died because they feared to fall short of what they knew was expected, and won their fight. Many a war is lost since few did not believe that what they chose to do would be found good. Displeasure which is expressed for a fault is found by chance or because of a desire to be displeased from time to time makes a martyr out of an offender.

Passing all other desires, save those of life and love, is the longing to conform to the standards of those in close association. No man wears blue boots when those of his mates are brown, nor can a dirty one live with clean men. There is the higher standard, the average, and the lower standard, and the three depend on example stimulated by Up Above.

This is the doctrine of the Big Stick which, if one studies history, stands out as the main driving power of all leaders in all times and in all circumstances, and which runs:

Promote him in due season who is the best fitted for the work, and leave no stone unturned to make certain. Leave him to his fate whose merit is his age, his past or his friends. Keep not the man who pulleth not his weight for he is useless to the team that is to win.

Let such ones go kindly so that they go quickly. Let him that recommendeth take heed lest he fail, in his degree, to help those Up Above to a right understanding, and his name be as mud. Be not ashamed to admit a mistake when satisfied, for the hand of every man is against them who search souls.

Reward not the man but his work, for the latter being silent yet speaketh to the whole world, whereas the former speaketh often and much to those he would influence. It is better to leave alone him that deserveth well than to risk rewarding him that may be a poor case, resting on the work of others, for a bad reward will do more harm than an excellent one would do good. Watch carefully to see that those below work and watch on like system, so is the work Up Above alone made possible. Him that faileth to play the game, let him also depart very quickly. There is no health or pleasure in drinking water from a tainted fountain or out of a dirty cup, for it is an offence to give and hurtful to receive.

Use the power that is given, for unused it is a danger and an injustice to all. None but they who have power can enforce a standard, and herein lies the nettle sting. If one should chance to fall below the standard and nothing happens, then those who did or knew the thing believe that there is no power or else no insight. The wages of undetected, or unreproved faults are death to goodwill, for it is always the peculiar business of Up Above to know and know fully, and knowing all to act to the benefit of goodwill. Search therefore the acts, minds and hearts of those down below and stay neither speed nor action to make the matter clear according to definite system.

Be not deceived: success cometh never by chance growth, but by design and system, by consistency and deserving. How then shall he stand who regardeth his friend or his enemy rather than his cause, or who persuadeth himself that less than the best and utmost matters not. In him there is neither sense nor understanding and in due season his name shall be written in the mud. □

AAJ MONTHLY AWARDS

The Board of Review has awarded the \$10 prize for the best article published in the July 1967 issue of the journal to Warrant Officer P. G. Gittins for his contribution titled 'The Sino-Soviet Border Dispute'.

Recommended Reading

THIS is the ninth list prepared by the Australian Staff College and published in the journal for the benefit of the officer seeking to improve his professional knowledge through the study of past events and current trends and developments.

The lists are by no means exhaustive; they do not aim to list every book that every officer may wish to read. They are intended as a guide to planned reading which aims at the acquisition of knowledge of

- (a) Contemporary military thinking.
- (b) Political, economic and scientific developments which have a bearing on Australian defence.
- (c) Military history.

The fact that a book is recommended does not imply official approval of the author's views and interpretations; it merely signifies that the recommended book contains a thoughtful presentation of facts, or analyses viewpoints which merit the attention of military officers.

Some important omissions are probably inevitable. Readers who are aware of such omissions are invited to send their suggestions to the Australian Staff College, Fort Queenscliff, Victoria, giving the title of the book, its author and publisher, together with a brief synopsis or review of its contents. The Staff College would welcome assistance of this kind.

WHY VIETNAM, by Frank N. Trager (The Pall Mall Press Ltd)

ONE of the better books of its type to appear recently, the main thesis concerns the international legality of American involvement in Vietnam. The writer uses the history of the Vietnamese people's continued struggle against alien domination, the deficiencies of the Geneva Conference of 1954, and the various agreements between the USA and the Republic of Vietnam to develop a strong argument for the legality of this involvement.

Trager, a professor of International Affairs at New York University and former director of the Point Four Programme in Burma is well suited to write on the subject of Vietnam. He has travelled extensively throughout South-East Asia and is the author of numerous books and articles on the Asian sphere.

If the reader's interest arises either from the probability of serving in Vietnam or from studying current affairs in preparation

for promotion examinations this book is strongly recommended; from it can be gained a good understanding of a serious and complex world problem. □

THE NEW FACE OF WAR, by M. W. Browne (Cassell)

THIS book is a frank and unbiassed account of the military and political events which led to and culminated in the present revolutionary war situation in South Vietnam.

The author has objectively presented the strengths and weaknesses of the South Vietnamese Government, the Viet Cong and the American intervention. The aims of the Viet Cong and their tactics are examined and explanations are supported by factual examples to illustrate the methods of propaganda, terror and brutality employed in the struggle for victory.

Increased American involvement in 1964 is analyzed: it is the writer's opinion this was untimely, unco-ordinated and perhaps doomed to failure because the military leaders have failed to adjust to 'the new face of war' — revolutionary warfare.

A dispassionate and critical background survey to the present situation in Vietnam, this book is enlightening and instructive. The author writes with conviction and authority gained from first-hand knowledge while serving in South Vietnam as a journalist during the period 1961-64. □

THE GERMAN ARMY, by Herbert Rosinski (Pall Mall Press)

IN this book Herbert Rosinski links the history and progress of the German Army with the development of the German nation. It has been said that an army reflects the character, aspirations and ideals of the nation from which it springs. The author demonstrates conclusively that until the rise of Hitler there was no greater proof of this statement than the link between the progress of the German people and the development of the national army.

Perhaps the major contribution of this book to significant military history is the detailed evaluation of the contributions of the major military thinkers and planners to the development of the army; from Frederick the Great in the eighteenth century to the far reaching re-organization of the army by General von Seeckt at the end of World War 1.

The German Army is a study of military history that exceeds the narrow terms of that description. It is not popular history in the accepted sense but a scholarly work for serious students of the art of war. The style is often heavy and humourless and sometimes

the original sense has been lost in the translation. Despite this the interested student will find the book rewarding. The superficial student, however, more interested in modern techniques and latter day campaigns than in the growth and development of ideas and ideals should leave the book on the library shelf. □

ARRIVALS AND DEPARTURES, by James Jupp (Lansdowne Press)

PARTIALLY sheltered and secluded, as we in the Army are, from the 'slings and arrows' of normal civilian society we have little conception of the lot of the migrant in that society. We know only too well that Australia's future prosperity and security are inexorably bound to her migrant problem, but, we may ask ourselves, 'what is the problem'?

James Jupp, a lecturer in political science at Melbourne University and himself a migrant, sets out to examine our failure to attract, assimilate and retain migrants in sufficient numbers for our needs. He blames the government for using unreal propaganda to attract migrants and for its failure to reform social, financial, housing, educational and working conditions in favour of migrants. He blames the trades unions and employers for failing to prevent discrimination and he blames society as a whole for creating public prejudice and social barriers which hinder the assimilation of migrants into the community.

The book is a little too much a 'pot-pourri' of migrant's complaints and one feels that the author is himself guilty of prejudice. Nevertheless he advances many well-supported and convincing arguments to support his recommendations and, for these alone, the book is well worth reading. □

AN INTRODUCTION TO STRATEGY, by Andre Beaufre (Faber and Faber)

GENERAL Andre Beaufre is a distinguished French soldier and the present Director of the French Institute of Strategic Studies.

In his book General Beaufre examines the elements of strategy, explains the processes by which strategies are formulated, describes how modern strategies have been evolved and analyses the problems facing today's strategic planners.

There are two strong themes running throughout the book. The first is that it is of paramount importance that the formulators of national strategy keep up to date in the rapidly changing situation which characterizes today's world. The second is that modern strategic planning is all-embracing; it can no longer be confined to

purely military matters, but must include political, economic and technological considerations.

An Introduction To Strategy is well on the way to becoming a standard reference. Readers who are seeking a first rate text on the theory of strategy need look no further than this book. □

A QUARTER OF MANKIND, by Dick Wilson (Weidenfeld and Nicholson)

A Quarter of Mankind attempts to answer some of the questions concerning modern China and the author is well qualified for this task. He is a scholar, a traveller in Asia, editor of the Far Eastern Economic Review and a resident of Hong Kong.

China's internal affairs and external relations are paid equal attention. Mr. Wilson gives a scrupulously fair interpretation of such important matters as the Sino-Soviet ideological conflict, the impasse with the United States of America, the dispute with India and China's crude diplomatic adventures into the world's neutral states. He finds China irritating but not impossible and believes forces exist for eventual reconciliation with the world.

The author gives the source of each fact and scrap of information used and notes at the end of each chapter amplify the sources; most of which are official Chinese statements but quite a number are from recent visitors to China or refugees from that country. An excellent annotated select bibliography is appended.

This is a useful book for any army officer interested in a completely fair assessment of life in China, its posture as a would-be world power, and its probable future path. It is the more credible for its painstaking acknowledgement of the origin of each fact and for the intelligent deductions drawn from them. □

DEFEATING COMMUNIST INSURGENCY, by Sir Robert Thompson (Chatto and Windus)

THIS book is concerned primarily with the differing concepts applied by the governments of Malaya and South Vietnam in dealing with communist insurgency in their respective countries. The author writes from experience gained as a member of the Malayan Civil Service from 1948 to 1961 and as head of the British Advisory Mission to South Vietnam from 1961 to 1965.

As a civil servant Sir Robert Thompson's bias is heavily on the role of the government in an emergency but he also writes authoritatively on the military aspects of counter-insurgency operations. Even when dealing with the military aspects, however, he always

emphasizes that military power alone will not defeat the insurgents — the first and foremost need for success is a sound political, administrative and judicial base in the government.

Much of what Sir Robert Thompson writes about and many of his principles are to be found in military textbooks on the same subject. His comparison of similar situations in Malaya and Vietnam and their solutions, and his easy style of writing ensure that the reader's interest is maintained at all times. This is a book which should be read by all those interested in the problems of defeating communist insurgency. □

WAR WITHOUT HONOUR, by Gerald L. Stone (Jacaranda Press)

IN this book the author vividly describes the military and political battlefields of South Vietnam, analyses the implications of United States intervention, and suggests that Australia was wrong to commit troops in support of United States involvement. He suggests what attitude Australia should have taken and outlines the courses of action open to both the United States and the Communists in the Vietnam struggle. He concludes that Australia and the United States are risking too much in a war that cannot accomplish a great deal in the long-term struggle against Communist expansion in South-East Asia and in a war that could discredit them in the eyes of the world.

Mr. Stone is a Sydney journalist, a former United Nations correspondent and a university graduate in political science. He speaks with the experience of a special correspondent assigned to South Vietnam for three months in 1965. His style is factual, graphic, and certainly gripping.

War Without Honour would be a useful addition to any military library and is recommended as providing excellent background reading about the Vietnam war, and for stimulating the mind on the higher issues of the conflict. It is however, a book for the critical and intelligent reader. Misinterpreted, it casts serious doubts on the integrity and efficiency of Australian and United States governments. Mr Stone did not necessarily set out to do this. □

THE VIETNAM WAR: WHY?, by M. Sivaram (Charles E. Tuttle Co. Inc.)

WHAT is the conflict in Vietnam? Is it a civil war within the Republic of Vietnam or is it a war of resistance against unprovoked aggression from North Vietnam? Mr Sivaram deals specifically in this book with these questions and endeavours to provide a factual account of the situation in Vietnam up to mid-1965.

Commencing with the author's impressions of modern Saigon the book broadens its survey to include the local provinces. Personalities and the attitudes of China, Russia and the United States are examined in the light of their involvement in the Vietnam war. Sivaram describes Vietnam as presenting 'the tragic spectacle of a nation partitioned between two ideologies, caught in the vortex of the global cold war and going to pieces in the process'.

This book should be read by any army officer interested in gaining a clearer insight into the historical background of the war in Vietnam. □

ANZACS AT WAR, by John Laffin (Abelard-Schuman)

THE Australian and New Zealand military heritage has existed for merely two generations, yet Anzacs consider themselves fighting men second to none.

Anzacs at War is the story of the making of the Anzac reputation; it is the story of many battles in which Australians and New Zealanders constituted the major part of the British or Allied force engaged.

The author has attempted to instil in all Australian and New Zealand readers a pride in the legends and deeds of their fighting men. The reader will learn of reckless courage, of endurance and resourcefulness; he will not learn of the application of principles of war.

Anzacs at War is worthy of reading by all, not as a military text book, but as a record of those standards and qualities to which fighting men should aspire. □

THE THEORY AND PRACTICE OF WAR, by Michael Howard (Cassell)

THE past fifty years have witnessed remarkable changes in the means and methods of waging war and in the military philosophy of soldiers and statesmen. No man has done more to accurately record those changes than Captain Basil Liddell Hart.

As a tribute to Liddell Hart, Mr Howard has prepared this collection of fifteen essays, each contributing to the central theme of the theory and practice of war since the eighteenth century.

The book is arranged in three parts, each of five essays by students of Liddell Hart's philosophy. The first part records the essence of the theme up to the First World War. The second part deals with the period between the world wars, a period in which Liddell Hart had considerable influence on the military thought and activities of

almost every major power, and the final part develops the theme from 1945 to the present day.

Two essays deserve particular note. Alistair Buchan presents an interesting thesis on the future role of USA in the collective policy-making in Europe and Malcolm Mackintosh's thoughts on Russian military doctrine conclude that there is a changing balance of influence between military and political leaders there. □

LIVING WITH ASIA, by Dr J. F. Cairns (Lansdowne Press)

CAN Australia learn to live with Asia? The author, a prominent Australian Labour Party politician, seeks to convince the reader that it can, but not without some radical changes in the foreign and domestic policies at present being pursued by the Australian Government.

The author's basic purpose is to put before his reader not only a case for a revised national policy, but also the details thereof. He is primarily concerned with the necessity for a revised Australian foreign policy, but suggests that to embark upon such a policy without first taking steps to 'get our own house in order' would be disastrous. He believes that it is essential to firstly adjust those policies relating to stimulation of economic growth, immigration and many other 'matters of conscience'.

In support of many of his arguments the author calls upon factual evidence, some of which is now unfortunately out of date. However, this does not render his basic arguments altogether invalid, nor does it detract from the value of the book as a whole.

This book provides substantial food for thought because of the impact that the adoption of Dr Cairns' revised policies would have upon Australia's defence. □

FIVE JOURNEYS FROM JAKARTA, by Maslyn Williams (Collins)

IN this book the author has presented a case for a deeper understanding of a confused country — Indonesia. With Jakarta as his base, and at a time when Indonesia's confrontation of Malaysia was at its peak Mr. Williams travelled to Sumatra, Sulawesi, Bali, throughout Java and then returned to Australia by way of West Irian.

The book records in detail the many conversations the author had with Indonesians from all walks of life concerning their history, religion, culture and political beliefs. The text exposes the inefficient Jakarta administration as being responsible for the hardships the majority of the population suffer and the failures attributed to former colonial masters are graphically illustrated.

Mr Williams' style is clear and the book pleasant to read, providing the reader with the opportunity to gain an insight into many intimate aspects of Indonesian life.

For the officer yet to be introduced to a study of the confusion and complexities of Indonesian affairs, this book offers a good starting point. For the serious student of Indonesia, *Five Journeys From Jakarta* should make a useful contribution as additional background knowledge. □

THE ART OF VICTORY, by Philip Longworth (Constable)

THIS work is an authoritative study of the life and achievements of Generalissimo Alexander Suvorov (1729-1800) who revolutionized eighteenth century warfare, preceded the tactical principles of Napoleon by fifty years, became a legend in his own time but never received recognition from his Russian or European contemporaries. Yet, today, he is a symbol of Russian patriotism and the recognized founder of much of the Red Army's strategic and tactical doctrine.

Suvorov saw that success in war required the destruction of the enemy's combat power and that mobility and surprise coupled with unprecedented qualities of leadership could outweigh vast numerical disadvantages. He fought under appalling conditions but he was never defeated.

Philip Longworth has a rare ability to assess the worthwhile lessons of military history. Although obviously affected by the strength of his subject's personality he convinces the reader of the authenticity of his argument and presentation. This is considerably assisted by a detailed bibliography.

The work provides a text book on man-management and leadership and an easy-to-read study of the successful application of those principles of war which are independent of time, place, or the means to wage war. □