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COVER: Detail from the diorama 'Lone Pine, Gallipoli, August 1915', at the Australian War Memorial.

ARMY JOURNAL

A periodical review of military literature

No. 291, AUGUST 1973

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Members of 1 Troop, A Squadron, 1 Armoured Regiment RAAC, and LAD attached, with some village children in Ngai Giao, Phuoc Tuy Province, South Vietnam 1970.

25th ANNIVERSARY

The Australian Army Journal *has completed twenty-five years of publication. As a conversion of the old* Army Training Memorandum *it began with issue No. 1 of June-July 1948, and with the aim of: Providing a medium for the latest trends in military thought and developments at home and abroad; to provide information designed to assist officers with their personal studies and training problems; to stimulate thought and encourage the study of military art; and to provide the basis of an Australian military literature which would, in the fullness of time, equal in diversity the military literature of other countries.*

It is believed that the Army Journal *has fulfilled these aims. Its issues have also recorded the vicissitudes of the Australian Army during the past quarter of a century. Beginning at the time of the re-introduction of the Citizen Military Forces after the 1939-45 War, it has witnessed and reflected in its pages Australian Army participation in the Korean War, the Malayan Emergency, Confrontation in Borneo, the years of our involvement in Vietnam, and our other obligations, such as New Guinea and Singapore. It has also promulgated the changes in doctrine and organization and much of the rapid technological development since World War II.*

The Australian Army is entering yet another period of change, in a world which is continuing to change rapidly. The Australian Army must be ready to embrace these changes and to meet evolving obligations. Much will be required of its members and the Army Journal *looks forward to continuing the part it has to play as a medium of expression for the hard core of radical thinkers necessary if the Army is to progress.*

—Editor

The Australian Army Training Team Vietnam

- *in 1965 and early 1966*

Brigadier O. D. Jackson, DSO, OBE
Australian Staff Corps

RECENTLY I was asked to put pen to paper to contribute towards the writing of a history of that quite unique Army unit, Australian Army Training Team Vietnam. Trying to write such a contribution without reference material other than personal papers was, to put it mildly, not easy. Nevertheless the general framework of AATTV activity and many of the associated people and events were things which no participant could forget.

1972-73 has brought two things to the Team, first its withdrawal from Vietnam and, second, the dispersal of its last members to other duties. It seems an appropriate time to recall some of the early days of our participation in the Vietnam conflict. I have tried to do so in terms of personal experience and assessment in, hopefully, a reasonably unbiased fashion. I have avoided writing about the complications and intrigue of Saigon, a very real part of the war but a story by itself.

Brigadier Jackson graduated from RMC Duntroon in 1939 and served during the 1939-45 War first as a troop commander with the 7th Division Cavalry Regiment, with the 2/25th Battalion in North Africa and Syria, and then with the 18th and 25th Infantry Brigades in the New Guinea campaigns; after which he was sent to the Canadian Staff College, Kingston, instructing in jungle warfare. Post-war he joined the staff at RMC and then held various staff appointments at AHQ. He commanded 1 RAR in Korea in 1956 and in 1957 was appointed DSD at AHQ. In 1959 he became AAR and MA in Washington and on his return to Australia was Director of Infantry, and then commanded both 2nd and 3rd Pentropic Battalions of the RAR. In January 1965 he went to Vietnam to become commander of AATTV, later becoming the first commander of 1st Australian Task Force Vietnam. On his return to Australia in January 1967 he became Chief of Staff, Eastern Command (NSW) followed two years later by the appointment as Commander, Central Command (SA). At present he is Chief of Staff of 1 Division, Training Command, in New South Wales.

It is quite impossible to say anything about AATTV without first paying heartfelt tribute to the dedication, the courage, the ability and the soldierly good humour of the men who made up the Team.

Most of those first few months of 1965 were, for me, spent in trying to catch up with each man on the job. By all means of transportation, including foot, I managed to see most of them, and in the process much of South Vietnam, and something of its army and its peopie.

My travels in the north-east took me to the Demarcation Line, with the broad, muddy Ben Hai River and strange comings and goings at night, and to Cam Lo, a beleaguered place on Highway 9, where local forces were making some impact but where one was equally likely, along the road, to meet a smiling lonely peasant or a regiment of Viet Cong in daylight ambush. The itinerary then led east to Dong Ha, the last town on the coastal highway south of the DMZ; south along the coast to Quang Tri, the quiet little town of defended compounds and doors firmly closed by night; to Hué, the old capital city with its lush green foliage and moat-enclosed ancient citadel; south to Phu Bai, the site of a major recruit training centre.

Moving south again I spent some time with a group of advisers at larger Danang, the home of I Corps Headquarters, the oft raided airfield complex and the Special Force base which supported all the patrol posts along the Lao border. To add to the complexity of this picture, Danang also boasted clean sandy beaches befitting the French resort of Tourane and making it difficult to remember in daytime that the country was at war.

Farther south came Tam Ky and the pretty little coastal village of Qui Nhon where so few seemed to know who was on which side. It was here that the Australian officer on special duties cheerfully admitted that his contingency plan was literally to jump into the river and let the tide carry him out to the US Navy in the South China Sea. In this zone there were many other nameless places, just hill tops surrounded by wire, the homes of ARVN battalions.

In the north-west were those lonely Special Force camps, each with its own airstrip. Places like Khe Sanh, A Luoi and An Khe, surrounded by dense mountainous jungles. These were defended camps from which freely contested trails led west into Laos across the Ho Chi Minh Trail. They were stark places whose sole contact with civilization was by aircraft flying through the narrow cloud-covered valleys; an area

'Australia House', Danang.

where the RAAF Caribou became a household word. Incredible places where, in bad weather, roast rat was something to be seriously thought about and where it was not uncommon for tiger and lesser creatures to prowl the perimeter wire at night; places where one found soldiers who had not been back to base at Danang for two years or more and where one met ARVN lieutenants who had known nothing but fighting for ten years as platoon and company commanders.

In the centre of the country the itinerary led to the quiet-by-daylight coastal towns of Quang Ngai and Qui Nhon, and farther south to the Ranger Training Centre at Duc My where so often one felt as though one were back at Canungra. One strange feature was that the nearest airfield to the north of Duc My was dominated by a fortified Viet Cong camp and yet remained in use.

Then came the ex-mountain holiday resort of Ban Me Thuot. Here was the site of ex-Emperor Bao Dai's beautiful log timber hunting lodge, rich red soil and the heart of the Montagnard programme. This

was country where one could find the finest tiger, elephant and crocodile hunting in Asia, that is, provided the Viet Cong did not get in the way. Here were places where, after surviving a welcoming hug from a six-foot honey bear in the darkened doorway of a long house, one was entertained with raw buffalo meat and rice wine, accompanied by meticulous Montagnard protocol and preferably preceded by large doses of enterovioform.

The way then led to Dalat, the hill resort town and rest centre for Vietnamese and European alike. This was the home of the ARVN officer cadet academy and of miles of vegetables, coffee, tea and flowers for road and air movement to Saigon.

Next came a flight south to Baria the provincial capital which, a year later, was to become well known to the Australian Task Force. In 1965 it was a town on the fringe of Viet Cong dominated territory to the east, north and west. Nearby lay the Vung Tau Peninsula and the renowned French holiday resort of Cap St Jacques which was used by both the South Vietnamese and the Viet Cong. More importantly it was the centre of the rural reconstruction cadres training establishments. At that time there were no wharf facilities at the port and the future site of the Australian Logistic Support Group was empty shifting sand hills. Closer to Saigon the track led to the major air base near Bien Hoa where, later in the year, 1 RAR Group was to be based, the first Australian 'combat troops' deployed in Vietnam. Here in the local hospital an Australian civilian surgical team was working. Farther to the south the itinerary included places such as An Loc, Vinh Long and Tay Ninh, deep in the lush flat green country of the water-logged Mekong Delta region.

These perhaps disjointed comments about places so well known to members of AATTV are not intended to be nostalgic or in the nature of a travelogue, but rather to add some depth to the picture of the places and conditions in which the AATTV operated.

Wherever I went, I met Australian officers or warrant officers in ones, twos or threes cheerfully pulling their full weight as advisers, trainers, commanders and in special duties. Mostly lean men, sometimes lonely men, sometimes with dark shadows under their eyes, usually apparently oblivious to the danger around them, and always with a ready grin.

Operating with Special Forces at outposts.

It is fair to say that there was very little of military significance happening within the borders of South Vietnam in which some Australian didn't have a hand and in some cases a strategic or tactical influence way beyond numbers or rank.

Our efforts were, of course, thoroughly integrated with the United States, both in military and para military activities. Even more important, most members of AATTV had the ability to work with and alongside the Vietnamese. This philosophy was of course encouraged.

At this time the Viet Cong, without doubt, held the military initiative. Except for most of the 1st ARVN Division in the north and some units in the southern delta regions, the South Vietnamese Army was on the defensive. Very few operations of any size seemed possible. Units were mostly confined to the immediate vicinity of provincial capitals and to the wire enclosed army posts on hilltops. The Viet Cong were having great successes in large scale ambush operations and seemed to know all they needed to of ARVN plans and operations. The strategic reserve of marine and airborne units was over-committed to the defence of the Capital Military District around Saigon. American Service families and civilians were evacuated from the country, political coups and attempted coups were the all too frequent order of the day and the clouds of doom were gathering.

Communist operations had, of course, in the latter half of the previous year (1964) passed from Stage 2 to Stage 3 of Revolutionary Warfare. The Viet Cong, with their North Vietnamese colleagues, were gathering their strength for the final stroke of full scale conventional operations to destroy the South Vietnamese Armed Forces and with them the Government.

It was in this bleak setting that the AATTV was operating, using everything it knew or could learn to strengthen, to help, to encourage and to build for the future in the hope that there would be a future.

From the viewpoint of Team operations, it seemed to me that some types of activities were of greater significance than others. Some, in the changing situation, were more likely to have an important impact on the total war effort than others. It was becoming apparent that some of the instructional activities, for example in recruit training, were of lessening importance, either because our efforts had helped an ARVN training installation to achieve an adequate standard or because the

war situation as it was developing demanded more assistance in other spheres.

It seemed important to continue the advisory effort with the units of 1st ARVN Division. This division was strategically located as the most northerly division and therefore closest to the Demilitarized Zone between North and South Vietnam and near the important towns of Quang Tri, Hué and Danang. Commander I Corps, the dynamic General Thi, and his US Army Senior Advisor were both keen to retain the Australian effort in the unit and formation advisory teams.

Greater participation was required in the command, training and administration of the ethnic units operating with the US Special Forces. Some of these units were stationed at the Special Force patrol bases along the Lao border close to the North Vietnamese infiltration routes from the Ho Chi Minh Trail and in the valleys leading from these mountainous regions down to the eastern seaboard. Other units were held as ready reaction reserves at Danang base. Operationally, these forces were effective. They had a meaningful role in the war and there was a growing bond of mutual respect between them and the members of AATTV. As the months went by it was possible to increase this effort and it became common for Australian officers and warrant officers to lead patrols, companies and battalions on operations.

The AATTV instructional and supervisory effort with the US Army Advisory Team at the Ranger Training Centre at Duc My was still worthwhile and of high priority. It was helping to produce excellent results and raising the fighting ability of the elite ranger units throughout the South Vietnamese Army. It was also our nearest approach to a Jungle Training Centre Canungra type operation. While the numbers of AATTV serving here were slightly reduced, our impact and involvement were maintained.

Perhaps the greatest need of all was to increase our support to the para military activities being conducted under the auspices of the United States Combined Studies Division, as it was then known. Here was the real opportunity to help win the conflict at the all important grass roots level in the villages, hamlets and towns throughout South Vietnam. Here was the heart of the effort to free ordinary people from the Viet Cong. This organization was devoted to recruiting, training, controlling and maintaining South Vietnamese teams deployed throughout the country. Team tasks were to identify, locate and to

March past of AATTV at Vung Tau after presentation of the US Meritorious Unit Commendation, 30 September 1970.

destroy the Viet Cong insurgent cadres and infrastructure in contested hamlets and villages and to restore them to Government control and security. We became more and more involved in all these activities, extending from the extreme north to the Ca Mau Peninsula in the extreme south. In fact, in many Viet Cong controlled or in grey areas, this was the only real resistance being offered to the Viet Cong.

Closely allied to this work was the Montagnard programme based on the Ban Me Thuot area. Here an Australian officer assisted by one, sometimes two, warrant officers raised, trained and operated against the Viet Cong, a very effective fighting force of thousands of Montagnard. This programme was not without its particular problems as the Montagnard nation, of many tribes and dialects, covered areas of North Vietnam, South Vietnam and Laos. There was no great love between the Montagnard and the South Vietnamese. There had already been one rebellion against the Saigon Government which fortunately had been

quickly quashed, mostly due to the efforts of the young Australian captain. The political implications for Australia were clear. Towards the end of the period under review, the Australian effort in the Montagnard programme was, with regret, withdrawn. However by then the military and para military activities were well organized and, I believe, remained effective under American supervision.

Our other main concern was to provide a more effective degree of Australian control and support for the individual members of the Team. In particular, I thought it very important that those deployed for long periods in dangerous and isolated places should be visited by Australians at regular intervals. To help in this and similar matters, the Deputy Commander of the Team was moved permanently to Danang, a Team RSM was appointed and a senior officer in each geographic area was appointed to give closer supervision to the other Team members in his area. Steps were taken to formalize and expand 'Australia House' in Danang to make it the Team residential home/club for those off duty in the northern areas. I think all these things were of considerable help.

To leap forward a year into the early months of 1966, major changes had taken place. By this time the massive intervention by United States ground, air and naval combat forces was well under way. Other countries, including Australia, had also deployed combat forces into the conflict area. The all too frequent *coups d'etat* had given way to the authoritative but nevertheless more stable leadership of Major General Nguyen Van Thien, Chairman of the National Leadership Committee and Chief of State, and of Air Vice Marshal Nguyen Cao Ky, extracted from his beloved Air Force to become Prime Minister.

The initiative was passing from the Communist to the Government forces. Divisional sized operations were often mounted by United States or joint US/SVN/third country forces against Communist main forces and into Communist so called secret base areas in South Vietnam.

No longer was Communist intelligence so effective, no longer could they infiltrate into South Vietnam so easily and no longer could they mount large scale operations with impunity. Equally important Buddhist and student upheavals were less frequent and the Government pacification programme, even in rural areas, was gaining real momentum.

National problems were still enormous but the fight was being carried to the Communists at all levels.

In fact, I believe the Communists were beginning to wonder if their move from Stage 2 to Stage 3 of Revolutionary Warfare had not been, to say the least, a precipitate act — possibly even a major strategic mistake.

Looking back at the AATTV activities during this period, I am sure a great deal was achieved. It was an experience nobody could forget. I learned to respect enormously the members of the Team and I will always have a very real and warm affection for a group of proud, self-reliant and very effective soldiers. □

MONTHLY AWARD

The Board of Review has awarded the $10 prize for the best original article in the June 1973 issue of the journal to Lieutenant Colonel P. Varma for his contribution 'Citizen Forces in the 1980s: A Proposed Basis for the Reorganization of the CMF'.

Lieutenant General Sir Edward Hutton

The Creator of Australia's Post-Federation Army

Major Warren Perry, RL[1]

A CONTROVERSIAL subject in military training is the utility of military history. The controversy often rages around its suitability as a means for the attainment of prescribed ends in this training. But my intention here is not to analyse or to evaluate this suitability. My object is the more limited one of merely introducing my present subject by adding another value judgment to the controversy. This judgment is that the status of an Army rests rather on its past performance than on its estimated potential in say a decade hence. The American historian, Bruce Catton, has expressed this view in his *Prefaces to History* somewhat differently by saying: 'That status grows out of all the yesterdays which are history's especial concern and it is obviously something we want to examine as closely as we can.'

However, the ability to conduct an examination of the status an Army enjoys implies a knowledge of that Army's history and this knowledge is only attained by systematic and sustained mental labour. This need for 'systematic and sustained mental labour' is stressed because without it History does not yield up its lessons any more than do say Economics or Engineering.

Now is an appropriate time to take a look at a relatively small but important selection of 'the yesterdays' of the Australian Army, for the 4th August 1973 is the fiftieth anniversary of the death of Lieutenant

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[1] *Major E. W. O. Perry, ED, MA, BEc, FRHSV. Military Historian; Editor of* The Victorian Historical Magazine; *and contributor to the* Army Journal, *Canberra, the* United Service Quarterly, *Sydney, and* The Australian Dictionary of Biography *etc.*

General Sir Edward Hutton[2] who, in the role of a commander-in-chief[3], was the designer and maker of Australia's first post-Federation army.

Hutton planned and executed the scheme for the organization, administration and training of the Commonwealth Government's original military forces. This was a gigantic task and in its performance he displayed outstanding professional skill, unceasing industry and devotion to duty of a high order. He infused energy into all parts of these forces; he raised standards of training and discipline; and he tried, but not altogether successfully, to give the Australian Army a new and a better public image.

In discharging his multifarious duties Hutton often created opposition and stimulated criticism. Effects of these kinds are, of course, in reality inevitable. But Hutton sometimes made things worse than they need have been because of a want of tact. He was, for example, prone to pit his opinions needlessly against those of his ministers and at times to act impetuously with subordinates. One instance of this impetuosity occurred when, in Sydney in April 1902, he summarily relieved Colonel Wallack of his command almost at the moment when Wallack was about to sail for active service in South Africa.

Few, if any, members of the forces could have claimed that they had not seen him. In an age when the motor car and the aeroplane were not normal means of transport, he travelled far and wide throughout Australia to meet all ranks of the men he commanded.

Let us take a closer look at General Hutton. He was an officer of the British Army. He was no mere paper-shuffler. From the outset of his career his conduct stamped him as a man of action. He was born at Torquay in Devonshire on 6 December 1848 — it was a time when the Duke of Wellington was still Commander-in-Chief of the British Army. At Eton College, where Hutton was educated, he was nicknamed 'Curly' and this nickname stuck to him for the remainder of his life.

In August 1867 Hutton became an Ensign in the King's Royal Rifle Corps — one of the more exclusive regiments of the British Army and then designated the 60th Regiment. From 1874 to 1877 he was

[2] Lieutenant General Sir Edward (Thomas Henry) Hutton, KCB, KCMG, DL (Surrey), psc. Born 6 December, 1848. GOC, Commonwealth Military Forces of Australia from 26 December, 1901 to 25 December, 1904. Died 4 August, 1923.

[3] Hutton's official title was as shown in footnote 2.

the Adjutant of the regiment's 4th Battalion. Hutton was fortunate to obtain experience in this posting for the appointments of Adjutant[4] and of Quartermaster[5] provided basic experience for all higher staff training. That he did well in this posting was indicated by his once having been described as a 'perfect Adjutant'. As a regimental officer he was also an impressive and a dynamic person who served as an example to junior officers and other ranks of his battalion. In addition he took a keen interest in the battalion's sporting activities and in everything that appertained to the welfare of its men.

Hutton's experience was widened in 1879 to include active service. In that year he took part in the Zulu War — the campaign in which the Prince Imperial of France, then serving with the British Army as an attached officer, met an untimely death when surprised on reconnaissance duty.

Hutton was a forward looking officer with an active interest in new ideas applicable to military training. As far as the British Army was concerned, it has been said that he 'invented' a new arm known as *Mounted Infantry*. At the Royal United Service Institution in London in June 1886 Hutton, then a major, delivered a lecture entitled 'Mounted Infantry'.[6] The chairman on that occasion was General Lord Wolseley who was then regarded by many as the British Army's most distinguished and progressive officer. His chairmanship of this lecture was also indicative of Hutton's own standing in the Army at that time. Hutton laid down in this lecture the purpose of Mounted Infantry; and the views he expressed in it were later adopted as official doctrine when a School of Mounted Infantry was opened at Aldershot. This arm was known later in Australia as the *Australian Light Horse*.

Hutton's practical experience was widened still further in the following year when, in September 1887, he attended the Swiss Army's autumn manoeuvres. With the experience of four campaigns and an ability to speak French efficiently, combined with a pleasing manner, Hutton was of great assistance to the Swiss directing staff in its handling of the foreign visitors at these manoeuvres.[7]

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[4] Anon, *'Our Adjutants'. Colburn's United Service Magazine.* No. 620, July, 1880, pp. 350-5.

[5] Anon, 'The Position of Regimental Quartermasters Considered', *Colburn's United Service Magazine,* No. 617, April, 1880, pp. 403-18.

[6] Major E. T. H. Hutton, 'Mounted Infantry'. *The Journal of the Royal United Service Institution,* vol. 30, No. 135, 1886, pp. 695-738.

[7] *The Times,* London, 17 September, 1887, p. 6 and 6 August, 1923, p. 13.

Five years later, on 21 December 1892, Hutton gained two coveted distinctions in recognition of his distinguished services to the British Army. He was granted the brevet rank of colonel and appointed an aide-de-camp to the Sovereign — an appointment which involved mainly duties at Court ceremonies and one which he held for nine years.

Hutton served in New South Wales from 1893 to 1896 as Commandant of that colony's military forces.[8] During this time he carried out a major reorganization of these forces[9] and the experience he gained thereby stood him in good stead when he returned to Australia after Federation.

The last war in which Hutton participated, operationally, was the earlier part of the South African War of 1899-1902. When he arrived in South Africa as a *special service officer* Field Marshal Lord Roberts appointed him to command the 1st Mounted Infantry Brigade. It was made up of more than 6,000 Australian, British, Canadian and New Zealand troops. At Bloemfontein, on 6 April 1900, Hutton inspected Colonel J. C. Hoad's *Australian Regiment* and in the course of an address to the regiment he said: 'I am very pleased to renew my acquaintanceship with my old friend Colonel Hoad, and also with Australian troops generally. Some of your faces are well-known to me and recall pleasant recollections of the time I spent in Australia.'

At the close of Lord Roberts command in South Africa in October 1900, Hutton gave up his command there also and he returned to England. His services in South Africa had added lustre to his earlier military reputation; he was created a KCMG; and he was awarded the Queen's Medal with five clasps.

In England in January 1901 he was placed on half-pay and so he had time to study political developments in Australia — a country in which he had retained a strong interest since serving earlier in New South Wales. He watched closely from afar the military aspects of the inauguration of the Commonwealth of Australia in January 1901 and the subsequent political and military trends there. He aspired to become the Commonwealth's first commander-in-chief. But he had quarrelled with the Government of Canada when he had commanded

[8] As Major General E. T. H. Hutton he was Commandant of the Military Forces of N.S.W. from 20 April, 1893 to 20 April, 1896.

[9] Warren Perry, 'Military Reforms of General Sir Edward Hutton in New South Wales, 1893-96.' *The Australian Quarterly*, vol. 28, No. 4, December, 1956, pp. 65-75.

that country's military forces from August 1898 to February 1900[10]; and the Barton Government in Australia considered others for the position before him.

At last, however, on Boxing Day in 1901 Hutton became the first commander of the Australian Commonwealth's newly acquired military forces. From the time of this announcement he wasted no time in taking up duty. He left England without delay; he travelled across Europe and caught a ship at Marseilles; and when he landed in Melbourne, on 29 January 1902, the Commonwealth of Australia was one year old.

At this stage Hutton was fifty-three years of age; his salary had been fixed by the Commonwealth Government at £2,500 per annum; and he already had an established military reputation in the British Army although in Australia and in Canada it had a somewhat controversial character. Hutton made his headquarters in Victoria Barracks in Melbourne where the Minister for Defence, Sir John Forrest, had also established his offices in April 1901 and then gathered his civil staff around him.

Australia was not prosperous at this time, for it was in the grip of a prolonged drought which was to persist till almost the end of Hutton's period of command. These drought conditions did not foreshadow an abundance of funds for Hutton when drawing up his Estimates later for approval by higher authorities.

Hutton's main task was to organize into one homogeneous Federal force the six heterogeneous military forces which had been transferred to the Commonwealth Government's control on 1 March 1901 by the six State Governments. But from the outset he was confronted by three serious deficiencies. The Barton Government, although it had been in office for twelve months, had not formulated its Defence policy; it had not enacted any Defence legislation for Hutton to administer; and serious reductions were made in his proposed Estimates for 1902-03.

Until a Commonwealth Defence Act came into force to administer the military forces stationed in the various States, temporary legislative arrangements had to be made. These were that the forces in each State would continue to be governed by the Defence legislation which had applied to them immediately before their transfer to Commonwealth

[10] Professor R. A. Preston, *Canada and 'Imperial Defence'*. Duke University Press, Durham, N.C., 1967, pp. 252-5.

control on 1 March 1901. One effect of this absence of a Commonwealth Defence Act is not widely known today. It was that, until a Commonwealth Act came into force Hutton could not transfer a member of the Forces from one State to another unless the member himself consented to the transfer.

Notwithstanding these handicaps Hutton had to complete some important preliminary tasks before he could make an effective start on his main work. He had to create his own headquarters and he had to reconstruct the headquarters in the various States for it was through these various headquarters that he directed and controlled the military forces of the nation which he commanded.

In April 1902 Hutton submitted his first report of major importance to the Commonwealth Government. This report pointed out the strategical factors to be provided for in drawing up a scheme of defence for Australia and it outlined a scheme, paying due regard to these strategical factors, for the organization of the Commonwealth's military forces. The report was tabled in the House of Representatives, on 23 April 1902, and it was debated during the next few days. But the Federal Cabinet took no effective action at that time to settle the questions of policy which this report had raised.

In May 1902 the Prime Minister, Sir Edmund Barton, and the Minister for Defence, Sir John Forrest, sailed from Australia for England to attend in London the Colonial Conference of 1902 and the Coronation of King Edward VII. They did not return to Melbourne, then the seat of the Commonwealth Government, until October 1902. This absence of five months at this particular time was unfortunate for Hutton for he was obliged to settle his Estimates for 1902-03 with an Acting Minister for Defence, Sir William Lyne.

In August 1902 Hutton introduced a system of military training throughout the forces. It provided for field training annually in camps and for schools of instruction for officers and non-commissioned officers.

At the Lord Mayor's Dinner in Melbourne, in November 1902, Hutton declared: 'Australia's defence system is now in a state of transition. There is nothing for the forces and the public to do but to exercise patience until the Defence Bill is passed and the Federal Government's Defence policy is declared.'

In March 1903 Hutton became one of the central figures in a crisis within the forces in the Military District of Victoria. It had

arisen through his decision to place Lieutenant Colonel G. L. Lee, a permanent officer with a distinguished record in the South African War, in command of an improvised light horse brigade at the Easter Camp at Sunbury in the following month. Lieutenant Colonel William Braithwaite (1853-1922), one of the two battalion commanders of the Victorian Mounted Rifles, objected to Hutton's action. Braithwaite, who was senior to Lee but without operational experience, was supported in his protest by the other battalion commander, Lieutenant Colonel W. T. Reay (1858-1929). In civil life Reay was the editor of one of Melbourne's leading newspapers. For his attempt, in this instance, to raise standards of training, Hutton received some unpleasant publicity.[11] It was even rumoured that he intended to resign his Australian command and return to the British Army.[12] Finally, Sir John Forrest settled the case sensibly and, as Hutton had originally directed, Lee commanded the brigade at the Easter camp.

Hutton's scheme for the reorganization of the various former State forces into one Commonwealth military force came into operation, officially, on 1 July 1903. This was the scheme he had originally recommended to the Commonwealth Government in his report more than twelve months earlier, dated 7 April 1902. This scheme created a Field Force for the defence of Australia as a whole and Garrison Forces for local defence purposes in each State. At this time too a Commonwealth pattern uniform was adopted for general wear and it gradually replaced the wide variety of State uniforms which had hitherto been worn.

The year 1904, which was the last year of Hutton's command in Australia, opened with prospects of greater economic prosperity. But by this time the main features of his military scheme, based on 'starvation' Estimates, had been put into operation.

The long awaited Defence legislation also came into force in 1904. The *Defence Act 1903* had been drafted in February 1903; it was assented to in October 1903; and it came into force, by proclamation, on 1 March 1904, together with regulations and orders which had been made in accordance with this Act.

In mid-August 1904 the Watson Ministry, which had assumed office only four months earlier, resigned. The Reid-McLean Ministry

[11] *The Herald*, Melbourne, 18 March, 1903, p. 1.

[12] Leader in *The Sydney Morning Herald*, 24 March, 1903, p. 4.

followed. It was the fourth and final one under which Hutton was to serve in Australia. Its Prime Minister, Sir George Reid, was well known to Hutton. Reid had been the Premier of New South Wales when Hutton laid down his command in that colony in 1896. Reid's Minister for Defence in 1904 was Lieutenant Colonel the Hon. J. W. McCay who was also a lawyer and a soldier.[13] Militarily, he was the best informed Minister for Defence under whom Hutton served in the Commonwealth of Australia.

Three months later Hutton had done what he had come to Australia to do. His difficult and complex task of laying the foundations of Australia's small military force of about 62,000 men was finished in November 1904. The planning involved in this task and the drafting of the necessary regulations and orders for the force's administration were undertakings that differed little in magnitude and complexity from the work load which would have been necessary for a force of say 120,000 men or of even 180,000 men.

At the Lord Mayor's Dinner in Melbourne in November 1904, Hutton reviewed his work during the previous three years and he pointed out that he had served four different governments, four different prime ministers and six different ministers for defence. In one part of his speech he said: 'There are more tests of courage than those of the battlefield. It requires courage and tenacity to carry out reforms in the face of criticism in the press and parliament.'

A later speaker at the Dinner was the Prime Minister. Reid praised Hutton's work in Australia and he also said that: 'In years to come, after the heat of misunderstanding has passed away, the people of this country will see more clearly the results of the invaluable services that have been rendered to us, in the infancy of this nation, by General Hutton whose great ability and fearlessness has enabled him to lay the foundations of Australia's military defence.'

Six days later Hutton sailed from Melbourne to rejoin the British Army in England. But by advancing Australia's military interests he had not served his own career interests. After promotion to the rank of lieutenant general in November 1907 he was, in the following month, placed on the Retired List.

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[13] Later Lieutenant General The Hon. Sir James Whiteside McCay, KCMG, KBE, CB, VD, MA, LL.M. Born 21 December 1864. Australian Minister for Defence from 18 August 1904 to 5 July 1905. Died 1 October 1930.

Although Hutton did not visit Australia again, he retained a keen interest in its military affairs. He retained honorary colonelcies of two Australian light horse regiments till death; and he kept in touch with the Australian Army in a variety of unofficial ways. For instance, soon after the Royal Military College at Duntroon was opened, he presented to it his portrait in oils by Tom Roberts.[14] It was unveiled there in March 1913 by the Governor-General, Lord Denman, and still hangs, I believe, at the college. Although Hutton never saw 'Duntroon' he was one of the earlier people who had recommended the establishment of a military college.

General Hutton died in England on 4 August 1923 at the age of 74 years. He was buried with military honours at Lyne Village, near Chertsey in Surrey. There the Dean of Winchester conducted the burial service and Hutton's old regiment, The King's Royal Rifle Corps, performed the attendant military ceremonies. The wreaths received that day included one from the Government and people of Australia bearing a card with the words: 'To a distinguished Soldier and staunch Friend.'

Nobody today can contemplate the work which Hutton did, with scant means at his disposal, in the Commonwealth of Australia without being impressed by its fundamental character and its lasting importance; and nobody can fail to be impressed by the energy, skill and sincerity with which he did this work. The bent of his mind was ever towards the attainment of greater efficiency in the troops he commanded — efficiency in their organization, administration and training as well as efficiency in the promotion of their welfare. He saw his job primarily as one of leading men, of organizing and motivating them, of directing their work and of course of understanding them. But in doing all these things he had failures as well as successes.

No man ever achieved anything of consequence without meeting with opposition. Hutton did his work in an atmosphere of unrelenting conflict in which he acquired critics and detractors in parliament, in the press and elsewhere. He was accused of being a 'dictator'; he was charged in the Commonwealth with favouring officers from New South Wales when filling higher command and staff appointments; and he was referred to as a martinet. But nobody accused him of evading responsibility; nobody denied that he was a decision maker; and nobody described him as a 'chair-borne' general.

[14] J.W.N. (iesigh), 'Sir Edward Hutton: An Appreciation'. *The Lone Hand*, Sydney, 1 March, 1913, p. 440.

Any appraisal of Hutton as a soldier must rest finally on his work in the latter part of his career in the Colony of New South Wales, in the Dominion of Canada[15] and in the Commonwealth of Australia.[16]

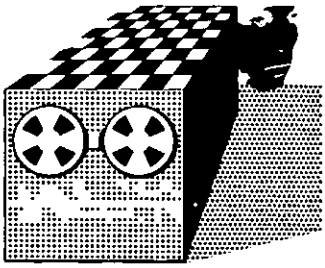
Fifty years have now passed since Hutton's death in England. It would be idle to claim that he is widely remembered throughout Australia today for the work he did here on two occasions as a re-builder of our military forces. But he will become better known when Australians take a deeper interest in their Army's history. ❑

In the early days of the Australian Commonwealth its forces were temporarily under a Commander-in-Chief (afterwards replaced by a Military Board), and for the first holder of this position Australia obtained from England the loan of a very brilliant officer, Major-General Edward Hutton, who had previously commanded in New South Wales. Hutton, like many of the leaders of history, was of the character which finds it difficult to bend its judgment to that of any other man. Shortly after his return to England he was put on the retired list, and was thus little known to the British people. But he was a soldier of a brilliance only too rare. His mark remained deeply impressed upon the Australian Army.

—C. E. W. Bean, *The Story of Anzac*, Vol. I.

[15] Desmond Morton, *Ministers and Generals: Politics and the Canadian Militia, 1868-1904*. University of Toronto Press, 1970, Chapter 7.

[16] Warren Perry, 'Military Reforms of General Sir Edward Hutton in the Commonwealth of Australia, 1902-04.' *The Victorian Historical Magazine*, vol. 29, No. 1, February 1959, pp. 34-57.



VIETNAM and the WESTERN MILITARY SYSTEM

two types of war in conflict

Donald Jender

Introduction

WITH the disengagement of Western forces from Vietnam, considerable effort will be put into post-mortems investigating how and why the USA in particular failed to achieve its objectives in Vietnam. Although it may be argued that the USA did achieve its aims as later defined ('peace with honour'), it is undeniable that US goals gradually underwent a not too subtle change, quite evident in the policies of US presidents. In 1956 Eisenhower policy envisaged the USA, among other things, '[a]ssist[ing] Free Vietnam to develop a strong, stable and constitutional government';[1] in 1973 Nixon declared that '[w]e accomplished the objective of the U.S. in Vietnam which, very simply, was to prevent the imposition by force of a communist government in South Vietnam'.[2] Clearly the pretensions of US aims in Vietnam became less exalted as the years passed.

On a more realistic level, some writers *circa* 1971 held rather less charitable views; for instance: '... the principal US war aim is one of rapid withdrawal from the war at a rate which will not create a situation prejudicial to other US commitments or create the actual opprobrium of defeat'.[3] Thus one may say that the USA failed in Vietnam, even though it was not defeated in the conventional sense. It has been realized that the reasons for this failure need investigation: '[i]n fact, the episode [Vietnam] has been so unfortunate that, at long last, someone may think the matter through and discover that, in this sorry tale, there

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Statements and opinions occurring in this article are the writer's personal views, based on private research, and do not necessarily reflect the policy of any organization with which the writer is associated.

may be vital lessons to be learned'.[4] Few would disagree with these sentiments.

There are no doubt many factors which contributed to the unsatisfactory US performance in Vietnam. One may view the problem in a variety of ways. For instance, Charles Wolf has suggested that the Vietnam failure may be traced to the inability of US planners to distinguish between limited and total war, in that limited objectives may produce 'failure' as distinct from defeat.[5] There is probably some substance in this argument, but I do not believe that it grasps the essential nature of the problem. Here I wish to advance the proposition that US failure in Vietnam may be viewed as a manifestation of a more general *malaise* in Western military planning. I feel there is essential importance in the following assertions by Michael Elliott-Bateman:

> We have been witnessing in Vietnam an important military phenomenon — a clash between two entirely different types of military organism that are opposites in their philosophies or culture, in their design and function, in their means of leadership and discipline, and opposites in their methods of processing or conditioning the basic raw material of war, which is man. We may also have been witnessing an important historic phenomenon — a watershed in military evolution — *the twilight of a traditional military system and the dawn of a new one that represents a higher order in development.* We have certainly been witnessing two entirely different forms of warfare that operate on different planes: three-dimensional conventional war adapted to counter-insurgency usage, and fourth-dimensional People's war.[6] [Italics mine]

I agree that *there are now two distinct approaches to the conduct of war, and that these have clashed in Vietnam.* For the purposes of labelling they may be designated the techno-scientific (technology and science) approach and the socio-political (sociology and politics) approach. I regret that the terms are somewhat unwieldy, but they are chosen for want of anything shorter and moderately relevant. The elaboration of these concepts now follows.

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[1] Sheehan, Neil, *et al.*, eds., *The Pentagon Papers: The Secret History of the Vietnam War as Published by The New York Times* (New York, Bantam Books, Inc., 1971), p. 24.

[2] *Australian*, 2 February 1973, p. 7.

[3] Candlin, A. H. S., 'Strategic and Political Vulnerabilities of the Communist States — Warfare in the Fifth Dimension', in J. L. Moulton, ed., *Brassey's Annual: Defence and the Armed Forces 1971* (London, William Clowes and Sons Ltd., 1971), p. 82.

[4] ibid., p. 81.

[5] Wolf, Jr., Charles, 'The Logic of Failure: A Vietnam "Lesson"', *Journal of Conflict Resolution*, vol. XVI, No. 3 (September 1972), pp. 397-8.

[6] Elliott-Bateman, Michael, 'The Form of People's War', in Michael Elliott-Bateman, ed., *The Fourth Dimension of Warfare* (Manchester, Manchester University Press, 1970), vol. 1, p. 153.

Outline of Discussion

The techno-scientific approach to conflict is the culmination of a long historical process. One of the outstanding lessons of history is the value of technological superiority. The epochal examples such as gunpowder and nuclear energy need only be mentioned. Historically, forces with superior technology have more often than not defeated technologically inferior forces, often where the latter have enjoyed a numerical advantage. The effect of these lessons was to encourage a belief in the inevitable triumph of technical superiority. This concept has moved with the times and acquired a veneer of sophistication. *The basis of techno-scientific war is a general belief in the triumph of scientific method, applied science and their military associates.* This confidence has increased with new developments in mathematical techniques, digital computers and integrated electronics. More will be said of these in due course.

The socio-political view of conflict tends to be held, consciously or otherwise, by those who do not have access to advanced technology and weaponry. This, of course, describes those who have a quarrel with an established government, or with a government which enjoys the support of advanced friends. This immediately establishes the association between a socio-political approach to war and guerilla warfare. As it is necessary for ill-equipped groups to use such resources as are available, this naturally leads to the utilization of personnel in every possible way, employing every possible avenue of activity. Indeed, the use of military force by such groups may be due to the failure of non-violent channels of protest. Thus the socio-political approach to conflict is characterized by an intense exploitation of a wide variety of activities, with the implicit assumption that all this activity is directed to some particular end. In practice *socio-political war is the well-integrated combination of sociological, political and military means to achieve a common (almost invariably political) objective.* Further discussion of these matters is given later.

The general thesis of this article is that *the failure of the USA to gain its objectives in Vietnam is due to the excessive emphasis placed on technical and scientific warfare and 'scientific' political analysis, and to insufficient emphasis on, and understanding of, the basic political and sociological aspects of the conflict.* A consideration of the so-called Pentagon Papers reveals that '[t]he Presidents [Eisenhower, Kennedy,

Johnson] never had the opportunity to examine the cultural basis for ideas of legitimacy and loyalty in Vietnamese history and society in order to see whether such a tradition could be adapted and moulded to make South Vietnam a viable state under American protection'.[7] The above thesis is not a new proposition, having been anticipated in 1961 by Samuel B. Griffith in his incisive introduction to Mao Tse-tung's *Guerilla Warfare*.[8] In view of the increasing likelihood of limited subversive wars in the future, the implications of the Vietnam experience are important for Western military forces.

Historical Precedents

Before elaborating on these ideas it is worth noting that there are certain historical precedents for the view that there are 'technology-like' and 'sociology-like' approaches to war. There is an 'operational' view of war, propounded by Jomini (1779-1869), which has influenced field commanders to the present day. This essentially regards war as a problem in logistics, manoeuvres and essentially 'mechanical' (though not unthinking) activities.

The alternative view (I hesitate to say opposing) is that war is a conflict of less tangible factors such as skill, determination and enthusiasm. Substantially this position was held by Clausewitz (1780-1831); for instance, in his classic work *On War*, there are chapters on moral forces, boldness and perseverance. It is possible to see the techno-scientific view of war as the Jominian position modernized in the light of later technical advances, and the socio-political view as the Clausewitzian position modified in the light of contemporary politics and ideology. Whether there is justification for this 'descendent' approach to military thinking is a difficult matter to decide; however it demonstrates that the presence of differing views of the subject of tangible *versus* intangible factors is by no means a novel situation. It might be mentioned in passing that the views of Jomini and Clausewitz themselves have been seen as products of the philosophical schools of rationalism and romanticism respectively. That, however, is another story.

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[7] Meaney, Neville, 'From the Pentagon Papers: Reflections on the Making of America's Vietnam Policy', *Australian Outlook*, vol. 26, No. 2 (August 1972), p. 192.

[8] Mao Tse-tung and Che Guevara, *Guerilla Warfare* (London, Cassell and Co. Ltd., 1965), pp. 7-28.

Study of International Affairs

It is also useful to point out that there is at present in the academic world a difference of opinion over what might be called 'scientific' and 'sociological' approaches to international affairs. This is important in the US context because of the influence of academics in foreign policy and military planning. Briefly, the dispute concerns the growing influence of scientific and mathematical techniques in the study of politics and sociology. As has been observed, '[l]ike it or not, the scientific study of politics has become an accepted, if not dominant, branch of political science'.[9] There is certainly in American studies an increasing use of game theory and statistical analysis, to mention only two fields. The paper by Charles Wolf mentioned above contains an interesting example of applied probability theory.[1] However, the tendency is not unopposed. Noam Chomsky sees it as encouraging disparagement of traditional intellectual values, and comments that this is '... in part a consequence of the desperate attempt of the social and behavioural sciences to imitate the surface features of sciences that really have significant intellectual content'.[2]

There is a somewhat different view which suggests that the mathematical treatment of political and sociological problems has been emphasized to the detriment of interpretation in human terms such as power relations, ideology and social conditions, and that we are thereby led astray. For instance, Hedley Bull has been a vigorous participant in the debate on approaches to international relations.[3],[4] The view that 'scientific' methods have been over-rated is one with which I have considerable sympathy, notwithstanding my own background in natural science, mathematics and computer science. It is now appropriate to consider in detail the two approaches to conflict, and the consequences when they clash.

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[9] Marks, Ramon P., 'Scientific Inquiry in Political Science', *School of Advanced International Studies Review*, vol. 16, No. 4 (Summer 1972), p. 18.

[1] Wolf, op. cit., p. 401.

[2] Chomsky, Noam, *American Power and the New Mandarins*, (London, Penguin Books, 1971), p. 269.

[3] Bull, Hedley, 'International Relations as an Academic Pursuit', *Australian Outlook*, vol. 26, No. 3 (December 1972), pp. 257-9.

[4] Bull, Hedley, 'International Theory: The Case for a Classical Approach', *World Politics*, vol. XVIII, No. 3 (April 1966).

Aspects of Techno-scientific Techniques

The techno-scientific approach to conflict is favoured in the USA and indeed is well in accord with strong mechanistic proclivities deeply entrenched in American thought. The war in Vietnam has provided the arena for the most extensive ever combat deployment of advanced techniques and technology. A sophisticated establishment is maintained in the USA to support such efforts. A catalogue of the devices employed in the field includes quick-firing airborne guns, lasers and heat-sensitive weapons.[5] US tactics in Vietnam, such as 'free-fire zones' and B-52 raids, have in general a marked emphasis on the application of advanced weaponry.[6] This technological aspect of the war is recognized in the USA: '... Vietnam has become a test-bed for the proof-testing and de-bugging of new hardware, new tactical concepts, new logistics systems....'[7] The terminology of such remarks ('test-bed', 'de-bugging', 'hardware') illustrates the contemporary fascination with technology. A perusal of US armed forces publications will show to what lengths this can be taken. In the wider context, the general attitude of Western forces has been to lure the enemy into a 'set-piece' or traditional battle where advanced weapons really count (that is, fight them on your own ground). A shrewd opponent seldom obliges.

It is of interest to describe some of the techniques and devices of advanced technology warfare, and discuss their capabilities and limitations. Regrettably, I feel the former are often overestimated and the latter underestimated, if not entirely forgotten. In what follows, I have not considered atomic, chemical or biological methods, as these do not seem to have been extensively employed in Vietnam. Where chemical cum biological activity has been attempted (defoliation), the results do not appear to have been of decisive importance. Nevertheless, the combat potential of the last two especially should not be forgotten. The amount of information on sophisticated weaponry available to the public is of course limited, but such material as is freely available will serve to illustrate my remarks. Information which is secret will differ from that which is public in degree rather than essence (I hope). The material to be discussed concerns what I believe to be fundamental to advanced techno-scientific warfare.

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[5] Leitenburg, Milton, 'America in Vietnam: Statistics of a War', *Survival*, vol. XIV, No. 6 (November/December 1972), p. 269.

[6] *ibid., p. 268.*

[7] Quoted in Leitenburg, ibid., p. 269.

It is valuable to consider what are the essential features of human activity. One may say that they are:

- The acquisition of information by the senses.
- The assimilation of this information by the brain in accordance with our knowledge and view of life.
- The formulation of a decision.
- The implementation of that decision.

Military activity may be fitted into such a pattern.

The story of technological war is essentially the chronicle of attempts to either improve the effectiveness of these steps, or automate them. Some would say that the latter is in reality an aspect of the former. As will emerge, I do not entirely agree with this view. Attempts to improve and/or automate the above four functions have been stimulated by fairly recent major advances in three fields: electronics, computer science and mathematics.

Electronics

The acquisition of information by electrical means is almost as old as knowledge of electricity itself. Wireless reception, made possible by the discovery of current electricity, is the acquisition of information. In fact, going back even further, one might construe the Jovian thunderbolt as a drastic way of communicating Olympian disapproval to terrestrial malcontents. However, it has only been recently that the electronic sensing of information has become of major importance; this due to the remarkable development of integrated electronic devices. For example, '[a] highly efficient seismic detector . . . distinguishes between human footsteps and chance noises from animals and wind. The system is intended for military use — the sensing equipment currently [1973] used by the US Army in south-east Asia all too often gives false alarms; the device is "about the size of a packet of cigarettes" and can be left in the field within radio contact of a base receiver'.[8] That a circuit capable of such complex activity can be put into such a small space is some indication of the capability of modern electronics.

It is but a step further to allow electronic devices to both identify enemies and attack them. This is the aim of the automated (or electronic) battlefield, described, rather dramatically, as '. . . an all-embracing system of electronic circuitry, which . . . will render the area of fighting

[8] *New Scientist*, vol. 57, No. 831 (1 February 1973), p. 250.

"a manless, foolproof, giant lethal pinball machine, out of which no living thing could ever escape" '.[9] As far as I am aware, development of this is still incomplete. A less ambitious version of the above was Igloo White, an '. . . air-supported, anti-infiltration system used to interdict the Ho Chi-minh trail. . .'.[1] The logic behind such an idea, the so-called 'McNamara Line', is given in the Pentagon Papers.[2] Igloo White required aircraft to receive and relay signals to a computer installation, where the information was analysed. This system suffers from certain disadvantages, one of which is the radio linkage required.

Computers

Computers are becoming increasingly important in modern military activity. Developments in electronic digital circuitry have reduced the cost and size of computers considerably. Extensive research has also added greatly to the range of activities which a computer can undertake. Most modern tactical aircraft now carry one or more computers for controlling functions such as navigation and weapon guidance. The range of possibilities for size and cost reductions with improvements in sophistication is far from exhausted; the stage has now been reached where it is possible to realistically contemplate a soldier carrying a special purpose computer, for instance, one which provides automatic computation of distance and direction travelled by the soldier carrying it.[3] This is some indication of the field use of computers. However, it is far from the whole story.

There is currently an increasing use of very large, sophisticated computer systems to assist in a variety of military activities. Much of this is concerned with matters such as payrolls and inventory control, applications which are also important in non-military fields. Together with this, however, there is considerable use of fixed computer installations in more definitely military roles. One of the earliest of these was the North American Air Defence network (NORAD); the Igloo White system mentioned above employed signals '. . . relayed from the [reception] aircraft for analysis in a fixed installation using computerized

[9] Lifton, Robert Jay, 'The Effect on the Veterans: "The Gook Syndrome" and "Numbed Warfare" ', *Saturday Review The Society*, vol. LV, No. 47 (December 1972), p. 71.

[1] News item, *Military Review*, vol. 51, No. 5 (May 1971), p. 94.

[2] Sheehan, op. cit., pp. 493-5, 507-9.

[3] News item, *Ordnance*, vol. 55, No. 303 (November/December 1970), p. 292.

equipment'.[4] Most large defence networks require considerable computer support; it is essential in missile and space systems. The previously mentioned uses of computers are common knowledge; less well-known are the more exotic applications. Some of these may be classed in general as 'digital simulations'; that is, the investigation of a problem by devising a mathematical model of the problem, programming it on a computer and examining the results of computer runs. In this area are weapon system simulations (a major field) and attempts at socio-political simulations. Examples of the latter are a counter-insurgency game called AGILE,[5] a 'role-playing crisis game' called CONEX[6] and a 'technological, economic, military, political evaluation routine' called TEMPER.[7],[8]

Mathematics

The extensive use of computer simulations has become possible partly because of recent advances in mathematics. Computers can only perform tasks which can be defined by human programmers, and much complex work is defined in mathematical terms. Two of the most interesting new areas in mathematics are linear programming and game theory.

The idea behind linear programming is best illustrated by an example. Aircraft operate from four bases to strike three targets. Because of differences in aircraft, range to target, and flying altitude, the tons of bombs per aircraft from any base that can be delivered to any target differ in a known fashion; for instance, base three is able to deliver eight tons of bombs per aircraft to target two, and so on. The daily sortie capability of each of the four bases is 150 sorties per day. The daily requirement in sorties over each individual target is 200. Find the allocation of sorties from each base to each target which maximizes the total tonnage over all three targets, and find all multiple optimum solutions.[9] This problem can be solved by linear programming. There are many examples which can be beaten into the linear program-

[4] News item, *Military Review*, op. cit., p. 94.

[5] Wilson, Andrew, *War Gaming* (London, Penguin Books, 1970), pp. 172-3.

[6] ibid., pp. 134-42.

[7] ibid., pp. 146-8.

[8] Abt, Clark C., and Morton Gorden, 'Report on Project Temper', in Dean G. Pruitt and Richard C. Snyder, eds., *Theory and Research on the Causes of War* (Englewood Cliffs, N.J., Prentice-Hall, Inc., 1969), Selection 18.

[9] Gass, Saul I., *Linear Programming: Methods and Applications* (New York, McGraw-Hill., Inc., 1969), pp. 230-1 (adapted).

ming form, even allegedly, '... the problem of selecting an air weapon system [for use] against guerillas so as to keep them pinned down and at the same time minimize the amount of aviation gasoline used...'.[1] I will comment on this type of problem later.

The other notable development in mathematics is game theory, where 'game' has a wide interpretation. In essence game theory concerns the following problem: if I am one of a number of players in a game, how must I play to achieve the most favourable result for myself?[2] The military, diplomatic and political implications of this problem are obvious. Game theory has been applied to a wide variety of situations, including the Vietnam war. Indeed, it has been said that '... Vietnam has been the fullest gamed, fullest analyzed and most intensively "planned" war in history', to the extent that men have been trained to meet situations suggested by war game analyses.[3] An extensive description of a Vietnam analysis with nine major issues is given by Nigel Howard.[4] All manner of situations have been investigated in mathematical form, including a variety of nuclear conflicts. It will be obvious from the above that military mathematics has ambitious aims. The proceedings of a NATO conference in 1964 contains interesting examples of the techniques and applications of game theory.[5] It might be mentioned in passing that there is a close mathematical relationship between linear programming and game theory.

In summary, it may be said that the modern field warfare situation involves:

- The acquisition of information by electronic means.
- The processing of the information by a computer programmed with a particular model of the combat situation.
- The production of a response by the computer, or else the production of results which are interpreted by a human analyst, who decides on a response.
- In the case of an active response, the dispatch of weapons under electronic or computer control to assail the target.

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[1] ibid., p. 16.

[2] ibid., p. 270 (adapted).

[3] Wilson, op. cit., p. 186.

[4] Howard, Nigel, *Paradoxes of Rationality: Theory of Metagames and Political Behaviour* (Cambridge, Mass., The MIT Press, 1971), pp. 127-40.

[5] Mensch, A., ed., *Theory of Games: Techniques and Applications* (London, The English Universities Press Ltd., 1966).

In the modern warfare planning situation, mathematical models are devised with the assistance of various techniques. The models are translated into computer programs which are run with selected options or conditions. The results produced are analyzed to provide information on the performance of a proposed weapon, or the consequences of certain actions or policies.

Evaluation of Techno-scientific Techniques

Having attempted to give an indication of the developments, capabilities and trends in modern technical warfare, it is now appropriate to consider the limitations of the techniques and devices involved. I regret to say that in this area there has been a tendency to extol the virtues of new developments while muting discussion of deficiencies, if indeed difficulties are even investigated. Problems tend to be of two types — technical and methodological.

Technical failings are well known, such as the extreme case of an aircraft which shed a wing while taking off. More common are the cases of systems which 'work', but do not satisfy the specifications completely; cases in point are aircraft with reduced range or payload capability. Lately we have also seen examples of inadequate performance achieved at inordinate cost. Some of the responsibility for this lies with manufacturers who hope for brilliant performance at reasonable cost with no difficulties in order to secure contracts. This weakness, coupled with a natural inability to foresee all the faults which will beset a new system, leads to less than satisfactory performance. However, with technical programs, at least one generally has some idea of where one stands, by virtue of interim reports on performance and cost. One would suppose that with more realistic and experienced estimates on performance, cost and timetable, some rationality could be introduced into technical programs.

However, it is problems of methodology and outlook which seem to me to represent more serious questions, by virtue of their intangible nature. In connection with electronic systems such as Igloo White, there seems to have been little discussion as to whether such a network was suited to the situation; if such discussion did occur, it was remarkably *sotto voce*. One suspects that once it was decided that such a system was technically feasible, the only decision then envisaged was one as to whether the deployment justified the cost. It is interesting to speculate on how much effort went into considering what the enemy might do to thwart such a network. This illustrates one of the impon-

derables of weapon design: one can attempt to imagine what the enemy might devise in counter-measures, but in practice the enemy has more incentive to develop effective counters than does the system designer.

In computer-oriented activities, one is obliged to deal with a problem in such a way as to make it possible to program the problem on one's computer. This may seem an almost tautological statement, but it has insidious consequences. One is the need to express all important parameters in definite numerical form. In situations where human factors are involved, this leads one into attempting to assign numerical values to political acumen, skill, determination and so on. In this subtle fashion, the computer, because of its numerical bias, shapes the form in which a problem is defined. Complete intangibles such as ingenuity are either crudely quantified or, worse, neglected; there is a temptation to think that if something cannot be assigned a value, it cannot be important. What is worrying is that in complex problems one cannot be sure that one has even discerned all the important aspects, let alone quantified them. It is always well to remember one of the watchwords of computer users — in general, Garbage In, Garbage Out (GIGO).

By an interesting coincidence, while I was preparing the final draft of this article, I came across a journal review of a recent book on the subject of game theory in international politics. The substance of the review was in close accord with my own opinions. The journal was *International Affairs* (Moscow), and, Soviet publications being what they are, it seems that I find myself in agreement with Soviet dogma on the subject, although for different reasons. Certain salient features of the review are worth quoting, as a view from the other side of the fence:

> Because [the author of the book being reviewed] analyses theoretical games concepts in the light of bourgeois ideology, he has been unable to discover and reveal the greatest defects in these theories, namely, that they ignore the most essential socio-economic and political factors, *the requirements of an historical approach, and the need to assess the deep-going processes and trends in world development* . . . it is not the games theory that is defective as such, but the unscientific methodology of bourgeois scientists who use the theory to study international relations . . . *quantitative analysis* must be subordinate to qualitative analysis, and *must go hand in hand with a study of the socio-economic, military, ideological and psychological factors, where many processes including the most important ones, defy mathematical formalisation* . . . international relations . . . can be correctly and truly scientifically analysed and forecast only on the basis of Marxist-Leninist methodology.[6] [Italics mine].

[6] Golubnichy, I., 'The Games Theory and International Relations', *International Affairs* (Moscow), January 1973, p. 99.

The last comment shows that the Western veneration of science is not the only shibboleth in the study of international politics.

There is much one could say about the methodological difficulties involved in applying game theory techniques to real conflict problems, but such a discussion would be somewhat technical. A critical evaluation of the subject is given by Anatol Rapoport in *Strategy and Conscience.*[7]

The above ideas on models suggest an interesting philosophical question: if one has a practical problem, in what way does a mathematical model of the problem differ from the real problem? Put another way, one asks: if a mathematical model represents some situation, is it the same situation as the real one? If not, how different from reality is it? If the answer is 'very different', then clearly all our efforts will not produce particularly useful results. As has been said in a slightly different connection, '[t]he complexity and subtlety of many management problems have quite naturally led the unwary to force the problem to fit an existing mathematical model, a procedure that is certainly not unique to this field of science'.[8] The same remarks apply to the use of models to investigate conflict situations.

The concept of a model is central to all scientific inquiry, and presumably to scientific consideration of warfare also. A long-standing scientific premise is that if one has a model which implies certain consequences, and these consequences are not realized, then the model must be modified, or, in extreme cases, rejected. It seems that at this time attempts to investigate social and political events by exclusively 'scientific' means are a failure; as a corollary to this, attempts to fight certain types of war on scientific principles, with the sophisticated devices of modern science, will fail. The reason for this failure lies in the inherent assumption that all activities are amenable to scientific analysis and prediction. At the moment, one may fairly agree with the view that '[s]ocial science is no substitute for strategy, neither is an input for an electronic war game a substitute for military planning'.[9] At present, human affairs are too complex for the capabilities of theory and computation.

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[7] Rapoport, Anatol, *Strategy and Conscience* (New York, Harper and Row Publishers, Inc., 1964).

[8] Churchman, C. W., 'Management Sciences', in W. Haley, *et al.*, eds., *Encyclopaedia Britannica* (Chicago, William Benton, 1969), vol. 14, p. 748.

[9] Candlin, op. cit., p. 87.

The above discussion naturally suggests two questions. These are:

(a) in what situations is the application of advanced science and technology appropriate?

(b) what is to be said about those situations in which the application of advanced techniques is supposedly not appropriate?

In answer to the first question, lest it seem that I am advocating some sort of 'back to nature' movement in military affairs, I must place the use of advanced weaponry in context. I feel fault is not with technology *per se*, but with the applications to which it is put. No doubt readers may have heard this argument in other contexts, such as 'amoral science'. Essentially, I have the impression that there is some relation between the general level of sophistication of the conflict environment and the technology which may be profitably applied to that situation. In particular, I feel that there are upper and lower technological limits (thresholds, in scientific parlance) applicable to a conflict. It is obvious that too great a disparity in weapons is to be avoided ('spears against Maxims'). It is perhaps less obvious that the use of ultra-sophisticated weapons can in certain cases be counter-productive. This view is supported by a former Yugoslav guerilla, Vladimir Dedijer, who notes that '... advanced weapons systems may be much more of a liability than an asset in anti-guerilla warfare'.[1] There are two reasons for this. One is that the enemy may not (and ought not!) present himself to be shot by exotic weapons. The other reason is that vast firepower tends to be unselective and by indiscriminate destruction excites opposition, both from those directly involved, and others. Thus I must courageously suggest that in some circumstances there may be a case for depriving troops of their most destructive weapons. Sir Robert Thompson makes this point well in connection with recoilless rifles.[2] Thus, in brief, I suggest that the US failure in Vietnam is in part a consequence of technological excess.

Concerning the second question raised above: I view this issue as fundamental to considerations of war in the coming years. It is very

[1] Dedijer, Vladimir, 'The Poor Man's Power', in Nigel Calder, ed., *Unless Peace Comes: A Scientific Forecast of New Weapons* (London, Allen Lane The Penguin Press, 1968), p. 36.

[2] Thompson, Robert, *Defeating Communist Insurgency: Experiences from Malaya and Vietnam* (London, Chatto and Windus, 1966), p. 62.

probable that socio-political factors will continue to figure prominently in limited wars; it seems that wars of subversion and insurrection will be a characteristic of the future. The need to appreciate the socio-political approach to conflict requires a detailed discussion, which is undertaken in the following sections.

Aspects of Socio-political Techniques

Most of the significant ideas about the socio-political aspects of conflict have arisen as a result of lessons learned in guerilla wars (people's wars, insurgent wars, revolutionary wars); the precise classification of such actions is not important here. The importance of guerilla warfare is natural, since this is virtually the only form of armed conflict in which socio-political aspects play an integral part. What follows, then, is essentially a discussion of the salient features of guerilla warfare.

Two points should be made initially. The first is that guerilla warfare is seen to be the form of conflict favoured in those areas most prone to unrest — Africa, Asia and Latin America. Kwame Nkrumah has stated that '[r]evolutionary warfare is the logical, inevitable answer to the political, economic and social situation in Africa today [1968]'.[3] The views of Mao Tse-tung, Che Guevara and others on the future of Asia and Latin America are known to be similar. Experience in these areas has confirmed that they are eminently suitable for subversive activity. Certain less-traditional regions may also suffer from insurgency in the future. The second point to make is that a view is developing in Western circles that the addition of socio-political facets is one of the major historical developments in warfare, comparable with the development of the tank in military technology, and the phalanx in tactics. Socio-political warfare has been described as the fourth dimension in warfare (or the fifth, depending on one's conception of basic dimensions).

If anything could be said to distinguish socio-political war from conventional war, it is the total involvement characteristic of the former. I hasten to add that 'total' is to be thought of in the sense of 'comprehensive', not in the nuclear sense of 'devastating'. Socio-political conflict will invoke all weapons, both material and organizational. This covers the spectrum from peace movements, 'moral' protests, political action

[3] Nkrumah, Kwame, *Handbook of Revolutionary Warfare: A Guide to the Armed Phase of the African Revolution* (London, Panaf Books Ltd., 1968), p. 42.

and international pressure to sabotage, assassination and full-scale war. Many of these may operate simultaneously. The history of Vietnam reveals the rewards which meticulous use of all avenues can bring.

Michael Elliott-Bateman has distinguished five battle fronts in guerilla war — *military, international opinion, social/economic, cultural/ideological and political.*[4] An examination of these will show that almost any human activity can be fitted in somewhere. The remarks of prominent guerilla leaders support this multi-front view; for instance, Vo Nguyen Giap notes that '[n]ot only did we fight in the military field but also in the political, economic and cultural fields'.[5] The major effect of this multiplicity of conflict arenas is that the conventional opposition may feel ill-equipped or uncomfortable operating in these areas, or, worse, may not even realize the fight has been carried into these fields. In fact, I do not think it inconceivable that a conventional force could be defeated by socio-political opposition without even realizing it. This would depend on how one defined 'defeat' and 'victory'.

Political Front

Of the above five fronts, possibly the most important non-military one so far has been the political front. The relationship between politics and war has long been realized, notably by Clausewitz in his famous dictum about war being a mere (!) continuation of policy by other means,[6] and, more mundanely, when he noted: '... the political object, as the original motive of the War, will be the standard for determining both the aim of the military force and also the amount of effort to be made'.[7] However, this view tends to conceive of policy only as initiating a conflict and defining the desirable conclusion; it is in a sense *external* to the conflict. Political action has now been extended to actually participate in achieving the required goals; it is a means to gain the desired end.

There are two senses in which politics operates in socio-political war. The first is in the use of political action as a tactic in itself. Thus

[4] Elliott-Bateman, Michael, 'The Nature of People's War', in Michael Elliott-Bateman, ed., *The Fourth Dimension of Warfare* (Manchester, Manchester University Press, 1970), vol. 1, p. 144.

[5] Vo Nguyen Giap, *People's War, People's Army* (New York, Frederick A. Praeger, Inc., 1967), p. 97.

[6] von Clausewitz, Carl, *On War* (London, Routledge and Kegan Paul Ltd., 1962), vol. 1, p. 23.

[7] ibid., p. 11.

one may attempt to infiltrate political parties, field candidates at elections, form political alliances, and so on. These activities are to some extent a distinct group, in that they can exist in the absence of military action. Such tactics have been sanctioned by long usage. The second sense in which politics acts in socio-political conflict is in influencing military options directly. Thus it is said that '[p]olitics must now interpenetrate military activity at every level as thoroughly as the nervous system penetrates the tissues of a human body, carrying to the smallest muscle the dictates of a controlling will'.[8] In practice this means constant evaluation of all actions in the light of the defined political goals. As is known, in Vietnam enemy offensives were undertaken with a view to the imminence of important political events such as elections. In a way, there is now a military-political analogue of 'situation ethics', in the sense that in both cases each situation is evaluated on its merits in accordance with some given criteria.

The remarks above on political goals lead to another important consideration — the understanding of objectives in socio-political war. It is a truism that in any activity one should be clear as to the result one wishes to achieve. Naturally this is particularly relevant in warfare, as has long been realized. For instance, Clausewitz discussed the ends of war in *On War*. Nevertheless, it is noticeable that, '[s]urveying the course of Western military intervention in the Third World since the late forties one is immediately struck by the paucity of thinking about the ends of policy'.[9] I am in complete sympathy with this view. Western military and political thought has been characterised by an inability to clearly formulate realistic policy towards socio-political conflict, and such thought as has occurred has been dogged by a dualistic 'light and dark' view of world politics more appropriate to the realm of theology; the Pentagon Papers give evidence of this. In contrast, the opposition goals are generally firmly rooted in basic, deeply felt needs such as economic and political reform and, often, expulsion of foreigners.

Three views may be quoted to support the importance of clear and relevant goals. Luis Mercier Vega, in discussing guerilla activity in

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[8] Howard, Michael, *Studies in War and Peace* (London, Maurice Temple Smith Ltd., 1970), p. 207.

[9] Darby, P. G. C., 'The West, Military Intervention and the Third World', in J. L. Moulton, ed., *Brassey's Annual: Defence and the Armed Forces 1971* (London, William Clowes and Sons Ltd., 1971), p. 65.

Latin America, notes that '... it is clear that the pressure for change, including guerilla warfare, is a response to the natural, spontaneous demands of revolution'.[1] Thus one's goals must be in general accord with the aspirations of the people. The writings of two people well acquainted with guerilla activity are most informative. The 'Preliminary General Plan of Insurrectionary Action' drawn up by George Grivas-Dighenis (EOKA in Cyprus) is a model of clarity in outlining aims, procedures and tactics.[2] On the other hand, Grivas commented on the apparent absence in the early stages of any relevant British plan of action.[3] It is interesting that Grivas drew up his plan before going to Cyprus.

Sir Robert Thompson (the Emergency in Malaya) has enumerated five principles on which a government fighting insurgency should base its actions. Two of these relate to the need for 'clear political aim' and 'overall plan'.[4] In a particular situation the five principles would be expanded into a comprehensive action plan.

Social/economic and Cultural/ideological Fronts

I now wish to consider the social/economic and cultural/ideological aspects in socio-political conflict. Because of a certain overlapping, these fronts will be treated together. In these areas lie the less tangible factors of a situation, but it would be dangerous to underestimate them, as they often provide the deep motivation behind popular action. In fact, Vladimir Dedijer has succinctly observed that '[s]uccessful guerilla warfare is essentially an art of the undogmatic and originally-minded social reformer'.[5] Social/economic factors are, for instance, racial discrimination and exploitation, oppressive class differences, and poverty. Cultural/ideological factors include culture clashes and differences in religious and political belief. It need scarcely be added that all these situations exist in abundance in the world today. Partaking of elements of both social/economic and cultural/ideological pressures is the simple and basic drive of nationalism. In the West there is a curious inability to appreciate the power of nationalism in peoples with

[1] Vega, Luis Mercier, *Guerillas in Latin America: The Technique of the Counter-State* (London, Pall Mall Press Ltd., 1969), p. 99.

[2] Grivas-Dighenis, George, *Guerilla Warfare and EOKA's Struggle: A Politico-Military Study* (London, Longmans Green and Co. Ltd., 1964), pp. 91-100.

[3] ibid., pp. 39, 48.

[4] Thompson, op. cit., Ch. 4.

[5] Dedijer, op. cit., p. 32.

developing senses of identity, yet it is probably the most significant practical force acting against foreigners in a country. The desire to be free of the foreign devils is strong. In Africa it is said that '[p]olitical education should centre on the key motive for the war — the will to be free'.[6]

International Front

The final non-military front is international opinion. George Grivas-Dighenis realized the importance of this area when, in his General Plan, he defined his aim in part as '. . . to draw the attention of international public opinion . . . to the Cyprus question. . .'.[7] This front is specially important where the enemy is sensitive to world opinion, or where the people of the enemy country have some ability to protest against government policy. Here clearly the position of the USA is relevant. One must be impressed by the masterly fashion in which international opposition to US involvement in Vietnam was encouraged, with the effect that dissent inside the USA grew. As a contrasting example, the Soviet government is very much less sensitive to international opinion, and the Russian population is not given to protest against official policy. The virtual absence of all but official information further diminishes the possibility of domestic opposition. Thus it will be apparent that international opinion is a field which may be exploited to good, but not always equal, effect.

Motivation

Having discussed rather briefly the salient features of socio-political warfare, it is ultimately necessary to consider what essentially motivates the participants in such conflicts. For while social, economic and political grievances can provide the basis for action, these factors do not of themselves win wars. When all is said and done, war is a concern of people, and socio-political war requires the most intense involvement of people. Those features which have fired human endeavour since time immemorial still emerge in times of adversity: courage, motivation, sacrifice, will, enthusiasm, determination, ingenuity and hope. On the question of how the Vietnamese can resist US power, it is because '[a]lmost nothing will convince them that this war is not a moral crusade, and that can only strengthen them. Long years of bombing by the richest and most powerful nation in the world has

[6] Nkrumah, op. cit., p. 73.

[7] Grivas-Dighenis, op. cit., p. 91.

shown them that their survival is a triumphant victory. Man has won over the machine. This is their banner'.[8] It is perhaps a pity that the US planners have either forgotten or never experienced the unifying effect which adversity has on a population. People who lived in Britain during the last war will remember how '[a] struggle in which every member of society feels himself involved brings about a heightening of national consciousness, an acceptance of hardship, a heroic mood in which sufferings inflicted by the adversary are almost welcomed, and certainly stoically endured'.[9] Reports from North Vietnam suggest that this effect is not confined to Europeans.

Conclusion

The war in Vietnam may be viewed in a variety of ways: communism *vs.* free enterprise, revolutionaries *vs.* imperialists, forces of evil *vs.* forces of good; these are common views. What is clear is that, in some sense, two vastly different forces are in conflict. The essential nature of the distinction is debatable, as are the causes of US failure; I hope there will be more discussion of these questions. Here I have concentrated on the advanced technology of the USA being in conflict with the advanced socio-political weapons of the opposition. Whether this is the most meaningful distinction remains to be seen; however, it is interesting that, even in 1954, American agents leaving Hanoi with the French were '... disturbed by ... the contrast between ... the victorious Vietminh ... and ... the well-equipped French whose Western tactics and equipment had failed against the Communist military-political-economic campaign'.[1] Yet it is possible to see the Vietnam conflict as essentially one more example of what happens when one side lacks the will to fight and win. One contemporary statement suggests that '[t]he civilization and warfare, originally dependent upon the courage and idealism of its people and fighting men, transforms to dependence upon gadgets. In modern times we call these gadgets black boxes. The enemy within is frequently just as large a contributor to the decline as the enemy outside'.[2] Ultimately the Vietnam experience may be a reaffirmation of the importance of human factors in war. □

[8] Emerson, Gloria, 'The Consequences for South Vietnam: Each Day is a Separate Ordeal', *Saturday Review The Society*, vol. LV, No. 47 (December 1972), p. 53.

[9] Howard, Michael, op. cit., p. 189.

[1] Sheehan, op. cit., p. 60.

[2] Davis, Harry I., 'Yesterday, Today and Tomorrow', *IEEE Transactions on Aerospace and Electronic Systems*, vol. AES-7, No. 5 (September 1971), p. 1023.

Improving Managerial Skills

THERE are some people who are content to live in day dreams. They drift along waiting for friends or the government or circumstances to promote them into better jobs. They may have fitful yearnings toward advancement but they are not willing to do the preliminary work and pay the price. Such persons are not of managerial stature.

Every business knows that in good management lies the difference between success and failure. Administering a staff, a factory or an office is a difficult and complicated job. To find managers who are capable now and will improve their capabilities to meet new requirements is one of the serious problems in industry.

The title 'Manager' is not like a medal, awarded in recognition of past services: it is a new appointment to new work with new expectations. It demands continually increasing skills, whether it be management of a business, a school, a hospital, a church, an association or a home.

The word skill is ordinarily applied to the understanding and control of a mechanical process or dexterity in the manual shaping of a physical substance like wood, iron or clay, but it can also apply to the mental activity used in directing those who work with their hands. Improvement in a supervisor's skills must necessarily result in more effective performance by the people he directs.

The key word is 'improve'. It is a primary obligation of a manager to improve: to improve the work of the people he supervises; to improve the product; to improve the team-work that makes the business effective; to improve the individual work that makes the product the best in its line; to improve himself so that he is always leading from the front.

Obviously, the person who thinks at any point in his career that he knows it all is at a dead end, a most melancholy place to be.

Management is . . . .

Management is the guiding of work in a firm, a department, a home, or any other enterprise, to a predetermined end. Any group of people trying to do something needs a leader. There was once a Russian symphony orchestra that tried to perform without a conductor, but the experiment expired at the first concert.

From *The Royal Bank of Canada Monthly Letter*, July 1972.

One of the 'Management Capsules' of the United States Treasury Department has this to say: 'Three usual types of personnel are: those who make things happen, those who watch things happen, and those who don't know what happened. The manager of situations knows what is happening — and he is also making things happen.'

Management at every level has a continuing responsibility to improve the organization of the work under its supervision. It is accountable for the successful outcome of the team effort.

Whether your management is of a branch, a product line, a factory, an office, or an advertising agency, there are factors common to all these positions. You must plan and marshal affairs, initiate action and get things done, keep the organization working purposefully and harmoniously. Skill in all these can be excitingly improved so that you become a master strategist with people and a proficient tactician in organization.

The fullest use is not yet being made of the technology available to managers and workers in business and industry. The new techniques must get out of the catalogue into use: they have to be applied. Skill in operating the systems is a major need in a manager.

What skills do you wish to improve? Some persons might say that depends upon the special techniques of the line of business you are in — engineering, wholesaling, retailing, banking, transportation, and so forth. That is not true in this particular sense of skill. What you wish to improve is *skill in management*.

While the application of management skill will differ in various employments, the skill itself is different from skill with machines, account-keeping and commodity handling. It is a thing in itself.

To become skilled

Willingness to learn is a valuable virtue in a manager. You need to determine what is appropriate to your need. Have a positive, particular aim. It is not enough merely to want to improve. That reminds us of the unsuccessful hunter who said he did not aim at any particular part of the game he hunted, but at it generally.

If you came up through the factory, where you were wholly occupied with technical functions, you probably need to study economics, the special qualities of management, the place of your firm in the corporate galaxy, budgetary control, communications, marketing principles and sales development. You need such knowledge not only so

that you can operate your department with efficiency — and of course that is important — but so that you can discuss business intelligently with others in the management group.

Every advancement in managerial rank brings you closer to the large problems of the business, so that you need to develop new skills for every new level of responsibility. Upon being appointed to a post in medium-responsibility management, you should at once start studying to prepare yourself for the policy-making level.

When you have made a syllabus of the skills you wish to improve, the next thing is to get going. Men and women managers are attending courses to update their knowledge and improve their skills. Not all can leave their jobs for long periods, but universities are providing evening courses and mini-courses of three days or a week.

If a formal course is not available, all is not lost. There remains individual study, and many a person has pulled himself up by his books. The person who blames his non-development on the unavailability or costliness of courses is excusing himself for his donothingism. He is signalling that he should not be a manager.

Experience is valuable, but superiority in management demands more. A man may become a skilled mechanic through working at a bench, but a manager who is content to learn by experience is on slippery ground. It is wise to draw upon experience to avoid making mistakes, but the manager must not let experience hobble him so that he never looks beyond what has happened before.

No two situations are ever exactly the same. Many features may be similar, but one new feature can turn the situation into a wholly new problem to which there will be a wholly new answer. In arriving at this answer experience should be wedded to the results of knowledge acquired through study.

A manager is . . . .

The first requirement of a manager is that he learn to manage his job. If a person lacks required knowledge, and skill in applying it, a title plate on his door will not make him a manager.

Some qualities are natural, while others are skills to be developed. Professor William Gormbley, director of Harvard's Advanced Management Programme, is quoted in Vance Packard's *The Pyramid Climbers* as finding these qualities in executives: they are bright men; they know

how to get along with people; they have drive; they are men who have goals; they make the best of what they get; they are not content to sit still.

Being a manager requires mental, moral and physical strength. He must be careful, progressive, persevering and sagacious. He needs to be known for his dependability, reliability and loyalty. He is interested in knowing what is going on, so that he keeps up with developments. He has a philosophy: he knows the answer to 'what do I wish to accomplish?' and he is working doggedly on his plan to reach his goal.

The manager is a significant individual. He has ceased to be judged by the low eminences that formerly surrounded him. New standards have been set for him. He has to show stature on a new plane. He has widening relationships with employees, employers, stockholders, the community, the public and government.

No one can call himself a manager if all he does is keep people in order and keep work moving. That is a very low ceiling. His worth to his organization includes his capacity to understand all kinds of people, both equals and subordinates. His agreeable personal tone and manner, the variety and discrimination of his tastes and interests, the wide scope of his knowledge and the breadth of his viewpoint: these are basic qualities in his equipment. Their cultivation is necessary if he is to direct workers in the economic use of material and energy.

The manager's chief need, given technical skill to handle the mechanics of his particular business, is to understand people. Some are born with this quality, others acquire it: the manager must have it either by inheritance or by study and practice.

Being a manager will at times tax your resources of diplomacy. It is not sufficient to see something clearly: you have to convince other people, and this can be an exhausting process. If you must be aggressive, use tact. If you are right and others are wrong, use delicacy in telling them. Skill in negotiating includes knowing when to stop. It is injurious to exceed what is necessary, because it imperils the chance of victory.

A new starting point

It is sometimes difficult for a person upon reaching managerial rank to realize that the promotion has put him at a new starting point. It is true that his promotion acknowledges his demonstrated competence, but he cannot rest on this. There are new psychological problems associ-

ated with his getting along with new associates and superiors. He needs to guard against the occupational tendency to become so enamoured of his own department as to neglect the rest of the organization. He must cultivate goodwill of both subordinates and superiors if his firm is to benefit by full and complete team-work.

The prevailing proneness of people to go along in accustomed ways gives the aspiring manager a chance to show his creative capacity. This does not mean that he must stir things up and change systems and upset people to demonstrate that he is alive and hustling. A bull in a china shop will be sure to move things around, but not constructively. The manager must, as one executive put it, learn how to disturb the equilibrium without upsetting the apple-cart.

Show skill in tackling old problems, or those you inherited with the job, with energy and a fresh viewpoint. Seek help, accept help, and give help generously. Do not despise specialists. They have skills to which you need not aspire, but make sure that you understand the significance of what they tell you. You can use new techniques to develop efficiency and profitability without getting lost in methodology.

If there are any imperatives valid for all managers they are (1) be aware of what is going on, and (2) be ready for action. The manager is a manager of situations. No emergency should catch him without resources. Experience, study, observation, and thought have familiarized him with the conditions, so that he recognizes the needs of the situation and knows what should be done.

A manager must not conclude prematurely that a line of obstacles is so formidable that it cannot be overcome. A crisis gives a man a chance to show what he is made of. Welcoming difficulty eliminates the fatal-to-personal-success excuse of the man who blames some outside influence for a lag in productivity or a slump in marketing.

There will occur occasions when a manager will have to be willing to make a wise alliance with circumstances and submit with good grace to a course of events he cannot help. What is needed is skill in avoiding a too-ready surrender.

Managerial individuality

What a manager is in himself may be of more importance than his technical knowledge of his business. Bishop Phillips Brooks explained the greatness of Martin Luther in this way: 'Some men are events. It is

not what they say or what they do, but what they are, that moves the world.' They have individuality.

The manager whose life is bounded by rules is not making the most of himself: he needs principles to guide him. The realist author Stephen Crane wrote that a rule supports us by the armpits over life's mountain passes, while a principle makes us sure-footed. Principles are for leaders who do their own thinking; rules are for people who just wish to obey.

Doing something 'by the book' is not always the most satisfactory way. The manager is expected to originate, visualize, organize, energize and supervise.

This demands individual intelligent work, a quality that can be improved by any manager inspired by the lofty aim to build his own prestige on demonstrated mental capacity, matured intellectual power, and achievement of purposes.

Good management involves the reality of making decisions, a bugbear to persons who have not qualified themselves to cope. Here is a skill that can be cultivated by practice. It involves the facility to assimilate facts, integrate them, evaluate the resulting data, take alternatives into account, and produce a valid decision.

One vital knack is to recognize when there are enough facts to justify making a decision. It is not always the essence of good management to wait for all the desirable data. But, as is usual with all maxims, there is an exception: refuse to be hurried when sense or instinct warns that deliberation is needed.

The measure of skilfulness is effective action under whatever circumstances prevail. Nobody is specially interested in how hard a manager has worked, but in what he has produced. He will learn to make every act net the greatest possible results. He will, like the playwright, endeavour to draw everything neatly into a satisfying last act and a final scene.

Self-development

Even though a manager seeking to upgrade his worth attends a course in management skills, much of the improvement he makes will be the result of his personal effort. The self-development of a manager is far and away his most important effort directed toward enhancing his competency on his job and his personal contentment in his work.

No aspiring manager can sit back, wrapped in narrow interests, and wait for favourable opportunities and helpful people to come to him. He needs to stir up a free-flowing exchange of ideas from all possible sources. He must be continually aware of the shifting relative importance of operations and departments, of finance and markets. He should study systems management in both office and plant.

To keep in touch with the changing scene, the manager will find it profitable to belong to a group of people in the same line of business or the same occupation. This will give him a chance to see how his opposite numbers in other firms are doing their jobs. He should broaden his knowledge about political, social and economic affairs.

Ayn Rand makes this need clear in *The Romantic Manifesto* (Signet, 1971). 'To improve anything one must know what constitutes an improvement — and to know that, one must know what is the good and how to achieve it — and to know that, one must have a whole system of value-judgments.' How are these values to be selected except by gaining knowledge and tuning in on people?

To grow in management skill requires a great deal of thought, and business is looking for men who can think effectively. Expert men may do jobs, but the general counselling and the marshalling of affairs come from men who can use intelligently what they have learned.

A manager cannot become engrossed in routine operations, leaving him only odd minutes for planning squeezed in between engagements and distractions. The computer has introduced a new high standard of accuracy and speed in the handling of quantitative problems. Management must keep up with it by sharpening its ability to make qualitative judgments.

This sharpens the realization that a manager needs to broaden his intellectual outlook. Educated people with ideas are necessary. Wide general acquaintance with the humanities may not give a man the technical qualifications to put across a big deal, but it will prepare him to grasp the essentials of the human situation, and all deals, big or little, resolve themselves into dealing with human beings.

Look at tomorrow

Not many firms have clairvoyants on their payrolls, but every manager needs some of the skill a clairvoyant shows. He can use his own sort of crystal ball.

Sit down for ten minutes before quitting time with nothing on your desk but a pad of paper and a pencil. Look at tomorrow and make notes. What is to be started? finished? repaired? Where could a bottleneck develop? What slack time will there be into which you can fit odd items? Is there a peak load period that you can level off?

You are not a manager for today only, so you must spare a glance at what is coming up tomorrow. Are today's growth plans for your department adequate? Will the new system you plan to introduce meet the needs of that growth plan five years hence, or will it have to be scrapped for something new?

Look back over the progress the company has made in the past five or ten years, paying attention to forks in the road where a different direction might have been taken. Sniff the air: is the wind blowing your way? is there a whiff of increased competition? are there economic clouds on the national or world horizon?

You can upgrade your other skills by cultivating poise. A person who is stable emotionally gives evidence of it by being patient, tolerant, fair, open-minded, and understanding of the problems of others. Here is a skill to develop, replacing fretful stir.

Objectives and planning

Clarify, in writing, the end results you desire as an outcome of your effort to increase your skills. Determine what activities leading to those objectives are immediate and list the others in order of priority. If you improve your skill in grasping the whole situation and organizing your activity you have taken a big step forward.

Extend this gradually so as to embrace the objectives of your firm. Then you can place yourself in position to participate in the best possible way in the activity involved in reaching them. When you are well acquainted with your company's objectives, policies, plans and budgets you can dovetail your personal skills so as to make a maximum contribution.

Some persons shy away from the word 'plan'. It does include a lot of work, but it is a necessary part of any endeavour that is to be successful. Things have to be designed and blue-printed before anyone can make them.

Planning is not, as is too often thought, forecasting. It does not use a horoscope to foretell outcomes, but a pick and shovel to lay foundations.

When the plans are completed, the manager will add in their execution his energy of mind, improvisation to fill in gaps, and a touch of the genius that makes him managerial material.

Personal satisfaction

There is an important fact not to be forgotten in planning to improve your managerial skills. Significant individual life does not consist solely in reaching business goals. A person must stand for something within himself if he is to add meaning to his life. Here is the touchstone of a person's mind and spirit: does his effort to advance contribute to the quality of his thoughts and the worthiness of the image he has created for himself?

The final accounting of your worth as a manager looks at the quality of your leadership, not at test ratings or status symbols. Being a manager, like being a king or a president, is essentially of the nature of a service. To be successful in leadership service one must design the job, structure it, texture it, shape it with conscious purpose, and inspire his workers to carry it through to completion.

There is very little coasting in successful business. There is no neutral gear. The manager may not advance in great leaps and bounds, but he has to keep inching along. He needs to accept on account what he attains, and then pursue the rest. □

BOOK REVIEWS

BRASSEY'S ANNUAL, 1972. William Clowes & Sons, London. pp. 323, illustrated.

Reviewed by Lieutenant Colonel C. F. Thomson, School of Infantry, Ingleburn.

'THE object of strategy, as Schelling and others have reminded us, is to make one's adversary conform to one's will by reducing the other options available to him to the single alternative: subjection to an intolerable level of destruction to his property, and of deprivation, pain, mutilation and death to his population.' Thus succinctly begins the first article in the 83rd, and latest edition of *Brassey's Annual*.

With nineteen learned articles, two potted reports and the curricula vitae of its eminent contributors you might expect *Brassey's Annual* to be heavy going for all but the devoted student and those bowed with burdens of state. But this is not so.

Take, for example, the article by Major General Clutterbuck entitled 'Fingers in the Mangle'. If you ever wondered why some lesser nations no longer fear the consequences of turning the mangle of confrontation, 'Fingers in the Mangle' may help you to wonder less. The *USS Pueblo* was a tiny finger in the mangle when North Korea turned the wheel — yet no real effort was made to save the finger. Again, when North Vietnam turned the handle the full Stars and Stripes came through to fight bloodily and inconclusively. Perhaps you still ponder on the real value of an ANZUK deterrent in Singapore. If so, you might glean some clues from Major General Clutterbuck.

Again, if you were suddenly confronted by a distressingly efficient looking foreign warship riding herd on a dozen foreign trawlers inside Australian waters, and if you opened up *Brassey's Annual, 1972* on page 23 to obtain guidance on the attitude to be adopted, you would be disappointed. The article on 'Maritime Forces in Confrontation' should be read now, before the event. What is more, this article by Captain Hill, RN, is not without relevance to Land Forces in confrontation.

Among the many other thought provoking articles there is General Uzi Narkiss' contribution, 'The Israel Defence Forces in the 1970s'. This is good reading for the Cloud Nine riders; those who would dispense with a regular army altogether while depending on a part-time army *à la* Israel. The only circumstances that would bring about such a prospect would necessitate being surrounded by hostile co-believers in Abraham and a fierce devotion to the cause of national preservation. Yet we might learn from the 'operational methods' illustrated by General Uzi; especially the concept of training predominantly for night operations. 'Night gives birth to surprise', he says.

There is an article on Close Air Support and another on The Army in Northern Ireland. If China is your forte then there is an expert's estimation of China's strength today. If you get tired of the printed word you can rest on the illustrations. There is one of an infantryman attired in readiness to counter the strategy (see the definition at the beginning of this review) of the more prejudiced of Northern Ireland's citizens. This is interesting if we remember that no country has a monopoly on 'prejudiced' citizens.

Don't be misled, the articles in *Brassey's Annual* are serious studies on a wide range of topical issues. Remember, though, the contributions do not necessarily reflect the official view. □

Letters to the Editor

Dear Sir,

Staff College Crest

I was very interested to read about the Staff College Crest in the article by Major Cunningham entitled 'The History of Fort Queenscliff' in the May edition of the *Army Journal*. Major Cunningham's description of the design, although quite adequate for the layman to understand, was certainly not given in heraldic terms as he asserted. A description (heraldic term: blazon) of an armorial device has to be in sufficient detail to enable a herald painter to reproduce it without necessarily seeing the original.

For the interest of your readers and for the benefit of the Staff College, a blazon for the Staff College Crest is given below. It is in true heraldic terms which would enable any heraldic painter to reproduce the crest in colour. The shape of the motto-scroll however cannot be specified, and in heraldic painting is usually left to the artist.

The blazon reads:

Between the quillons of two swords, points uppermost and crossed towards their distal ends in saltire silver hilts and pommels gold, a boomerang fesswise the concave edge uppermost tenné bearing the word AUSTRALIA in upper case sans serif letters sable; above the boomerang and crossing the swordblades near the hilts a motto-scroll azure fimbriated and bearing the legend TAM MARTE QUAM MINERVA also in sans serif capitals all gold, perched thereon a powerful owl affronté its head surmounting the swords at their point of intersection and ensigned by St. Edward's crown resting on the inner edges of the swords below their points all proper.

Joint Staff
Department of Defence
Canberra

Major M. C. N. D'Arcy □

Officer Education

I appreciated Brigadier Salmon's long and generous review of my book in the April issue of *Army Journal*. I was particularly pleased that he thought my account of the problems of officer education before 1914 still had some relevance or 'lessons' for the present. I did an interview for the Forces Overseas network of the BBC and the final question (unrehearsed) was 'what is the relevance of your book to the serving officer of today'. I was hard put to find a cogent answer. As Brigadier Salmon perceived, some chapters were meatier than others, principally because the evidence is very hard to come by: it is a tragedy that there are no Staff College papers for the whole period. He criticized me (gently) for not distinguishing between training for staff work and command, but I don't believe the distinction was made at Camberley in those days. Perhaps the assumption was that any gallant blockhead can lead, but the staff need to be highly trained. I may mention that I am very interested in the contemporary education of Army officers and hope I shall get a chance to work on that huge subject.

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Proposed History

I am attempting to compile as concise a history as possible of wheeled and tracked amphibious vehicles. I am placing a particular emphasis on those amphibious vehicles designed and used by military agencies.

If any of your readers have any personal reminiscences, photographs, pamphlets or the like I would be extremely grateful to hear from them. Of course, any material will be returned promptly should the donor so wish and postage charges refunded.

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