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Capt Howard

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AUSTRALIAN ARMY JOURNAL

A periodical review of military literature

No. 202, MARCH 1966.

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VIETNAM. Armoured Personnel Carriers of the 4/19th Prince of Wales Light Horse Regiment during a pause in operations near the Bien Hoa air base. Troops of the 1st Battalion Royal Australian Regiment have been supported by armoured elements in their operations against the Viet Cong.

Photograph: *Army Public Relations.*

Man-the-weapon: Neglected aspects of Leader training

Lieutenant-Colonel J.O. Langtry, DCM,
Royal Australian Infantry

Introduction

RIGHTLY, we can take pride in belonging to the Profession of Arms. But in doing so we must not lose sight of the fundamental nature of our profession which is the employment of human resources (some would say, more concisely and simply, the exploitation of man) in war in its many forms. Therefore human performance is the crux of a military leader's profession.

I believe I am correct in stating that nowhere in the Army's training syllabus do facilities and scope for formal study of man-the-weapon exist. 'Man-the-weapon' is a phrase, readily accepted as being apt, but there the matter ends. There are courses in health and hygiene and, after years of endeavour, it appears that a text dealing with human physiological performance under climatic stress will soon appear. To have courses and texts is one thing; to ensure that human performance has a significant place in the curricula of our training institutions quite another. Some will claim that our current series of instruction in leadership adequately covers the field. I would challenge this and the basis of my challenge is the substance of this article.

Two basic aspects of human performance — physiological and psychological — have been dealt with separately in the

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The author saw service during World War II in the South-West Pacific from 1941. As an NCO in Bougainville in 1945 he was a noted patrol leader with the 24th Battalion in which unit he was later commissioned.

After the war he returned to civil studies at Melbourne University, where he gained the degree of Bachelor of Science. He was appointed to the ARA as a captain in May 1951. Subsequently he served in Korea and in FARELF. He attended the Command and General Staff College at Fort Leavenworth in 1963-64. His current appointment is Assistant Military Secretary at Army Headquarters.

AAJ[1]. This article endeavours to bring them together and into sharper perspective.

Brigadier-General S.L.A. Marshall, a noted authority on the American fighting soldier, has remarked that 'Our basic subject is man. All *advance* depends on knowing him better as a fighting animal, in the mass and under pressure, a highly sensitive, tough, yet fragile vessel, with *definable* limits'[2]. He is not implying that the limits of a particular individual can be defined with exactitude. In his book *'Men Against Fire'*[3] he makes the points that 'Courage is inherent . . . but remains . . . unknown until the chips are down . . . There is no feature of training which enables determination, prior to combat . . . which men will carry the fight.' But he is prepared to state that 'there is no such person as the soldier who is dauntless under all conditions of combat'. Within any large body of soldiers in combat a significant percentage will be comparatively ineffective. This percentage sets a limit to the performance of the group. The limits of physical performance can be defined more easily and with greater exactitude than purely emotional reaction to combat.

Let us accept then that there are 'definable limits'. It is rare, however, to find a military leader who is knowledgeable concerning these limits. Commanders, both now and in the past, through ignorance of the limits, have tended to under or overestimate their human resources in war. They have not appreciated the full significance of the fact that the basic determinant of the efficiency of the soldier in combat is his physiological and psychological status. Since the unit depends upon cohesion and teamwork, even a comparatively slight drop in the soldiers' psychological and physiological status will very often lead to a greatly exaggerated loss of efficiency in the unit. Conversely a slight improvement in individual performance can give a marked boost to a unit's overall performance and perhaps mean the difference between victory and defeat.

This notion that leaders must be knowledgeable about and attend to the psychology and physiology of man is not new. Principles of Leadership have been enunciated. High in the list are:

(a) know yourself and seek self-improvement;
(b) know your men and safeguard their welfare.

I would like to dwell for a moment on the significance of the words 'safeguard their welfare'. This introduces a humani-

1 *Australian Army Journal*, Nos. 107, Apr 1958, and 110, Jul 1958.
2 Brigadier-General S.L.A. Marshall, "Group Shock and the Future Battle" (*Army*, 7, 10 May 1957).
3 *Men Against Fire* by S.L.A. Marshall (New York, 1947).

tarian as well as professional note. As a parent who may be required to entrust my child to a young 'professional' officer, I would like to be sure that the officer had a better than intuitive knowledge of my child's definable limits and hence, knowing these, could give him the best possible chance of surviving within the context of the situation.

I suggest that for the commander a formal although limited study of man's physiology and psychology in *battle* would lead to:

(a) Improvement in the quality of his leadership.
(b) Clearer appreciation of the 'worth' of his force.
(c) Improved management of his human resources (including improved training techniques).
(d) Improvement of unit and individual efficiency.
(e) The ability to obtain the optimum from a force with less risk of under-estimating or over-estimating its absolute capacity.

Although there is a very close inter-relationship between the psychology and physiology of man in the ultimate determination of his performance, in the beginning it is as well to deal with each separately.

Psychological Aspects

The aspects which I feel have been most neglected concern the suppressing of undesirable psychological manifestations in our own troops and exploiting to our advantage similar weaknesses in the enemy.

About 15 to 25 per cent of persons confronted with sudden danger can be expected to respond purposefully, quite rapidly developing sustained effective activity. These are the persons best adjusted psychologically and the best trained to develop immediate action. They are usually too busy to remember feeling subjective fear during the period of danger, but may have a typical let down later. The remainder and the majority of the group confronted with the same immediate danger will be stunned and bewildered. There may be instinctive crouching and turning movements, but they will need an appreciable time to evaluate the situation.

One could put this another way: about 75 per cent of persons confronted with sudden danger can be expected to be ineffective for a significant time. Experience, training, the nature of tactics and leadership can perhaps shorten this time for most, but cannot eliminate it altogether.

It is a fact too that inaction is likely to intensify the fear reaction, thus increasing the chances of non-effective behaviour for a longer period.

I will not elaborate on this theme beyond saying that, in the military sense, we must make every endeavour to capitalize on such predictable enemy reactions to sudden danger and, at the same time, employ techniques which will reduce the fear reaction and/or its consequences in our own troops.

An important fundamental emerges: in situations where the impact of danger is sudden and of personal concern, especially at the section or platoon level, an immediate action (IA) drill is infinitely preferable to a more considered plan developed from a conventional appreciation.

It is gratifying to note that our new military text dealing with ambushes makes provision for the 'assault from ambush'. From any stand point it is an effective and aggressive tactic which ensures a higher kill rate; but it is especially interesting because it has evolved directly from an appreciation of human behaviour in battle: that is to say it capitalizes on the shock reaction produced in the enemy, reduces the tendency to non-firing in our own troops and engenders the aggressive spirit.

Non-firing or deliberate failure to fire is a facet of human performance which has been swept under the carpet for too long. There are all too few fearless soldiers. American research teams, working among their own troops in World War II, came to the conclusion that as many as 75 per cent of infantrymen failed to make proper use of their weapons in battle. In Korea it appears that there was a marked improvement in that more than 50 per cent fired effectively, although there was a high incidence of panic firing among unseasoned troops during night defence. The incidence of non-firing by troops in ambush at night was alarmingly high on occasions. Figures, such as the above, taken out of context can be very misleading. The statistics for Vietnam may show a further improvement. However, non-firers are common to all armies and, even should they amount to only 5 or 10 per cent, this is significant for the 'professional' leader.

Perhaps the improved performance of US troops in Korea was due in part to the leavening of leaders who had had combat experience in World War II. The 'old sweat' with battle experience comes to adopt a philosophic attitude to danger not akin to fear, more in the nature of superstition. However it was assessed by General Marshal that revised training techniques played a major role in improved performance in Korea, particularly with regard to the junior leader's role in combat. General Marshal observed that NCOs in Korea moved about more and got their men firing before involving themselves in the fire fight. This was not so general in World War II when it was assumed that the inexperienced soldiers

would be self starting. Usually only the old sweats can be relied on to initiate effective firing of their own accord (and then not always), and it can take a considerable time in action before one can qualify as a seasoned, efficient combat soldier.

Depending on his subjective make-up the individual overcome by terror either becomes prey to an incapacitation which makes him incapable of any action, or gives himself over to purely instinctive action, the sole objective being self-preservation. This group is of special concern to the leader. His problem is to suppress these undesirable reactions to battle stress. The study of leadership techniques must be related to this human frailty. Minor tactics should be modified to channel human behaviour favourably in the stress of battle. Two men sharing one weapon pit or listening post are less prone to panic than a man alone. In ambush individuals should be paired off. Interdependence in the form of team work is most beneficial. A machine-gun team is less susceptible than a pair of riflemen. Personal contact by the leader is valuable — to encourage, coerce and supply some orientation of purpose in a state of genuine chaos. Shouting in attack and defence can do much to overcome 'battlefield loneliness' by maintaining cohesiveness and thus relieving the strain.

The design of weapons in relation to the individual's needs in combat is also a neglected field. A weapon designed to meet ballistic specifications without regard to the needs of the firer in the heat of battle can only contribute to the incidence of non-firing. Too often and for too long have the infantry been given weapons which are not as well designed as they might be to the combat soldier's requirements. They may have been superb rifles for deer stalking or for competition shooting on the range, but some have been a handicap to the soldier under stress — for example, the Lee Enfield of World War II and Korea. Of late there has been an improvement but room for improvement remains.

Emotional fatigue and recuperation cannot be separated from the physiological stress. For instance the more heavily men are loaded and the farther they move, the more susceptible they become to fear. The more intense their fear the greater becomes the impairment of their physical power. It is almost axiomatic that the physically fit and properly acclimatized are less susceptible to fear. Fear and fatigue are interdependent and reciprocal in their effects.

The related subject of recuperation is also of great importance in that it can have a bearing on tactics. Where

emotional stress has been the main contributing factor in fatigue and the stress has been of short duration, only a very brief rest is necessary for recuperation. A 20-minute spell at the end of an attack, should the tactical situation permit it, will work wonders in restoring confidence and increasing physical capacity. Even after intense and prolonged battle stress over a period of days, 48 hours *complete* rest will restore full operational efficiency. 'A stitch in time saves nine', but failure to recognize the requirement for rest can prove disastrous. As a general rule one group should tackle only one main task in a battle sequence on any one day.

The current nature of war as exemplified in Borneo and Vietnam may place considerably greater stress on units and on the individual soldier than was generally the case in World War II and in Korea. Troops in Vietnam are committed for longer periods overall without the benefit of periodic spells of absolute rest and recuperation in safe areas; rear areas are indistinguishable from the combat zone in this sense. Aspects such as these must be taken into account when deciding the length of an operational tour of duty. No general rule applies; each circumstance must be analysed separately.

What I have endeavoured to do here is to illustrate the type of psychological subjects which I believe should be included in a curriculum for the training of leaders in the field of utilization of 'man-the-weapon'. The field is nowhere near exhausted: panic, standard of training and discipline as affecting behaviour in battle, *esprit de corps*, personal and group responsibility, small group command (the corporal's command), the handling of battle fatigue in the forward area and many other such topics warrant attention, not the least of which is the role of the combat psychologist.

Physiological Aspects

The aspect I next wish to stress is the effect of hot, particularly hot-humid, climates on the performances of the soldier. As I understand it, a text is now in production which should provide a basis for understanding the nature of the stress imposed by tropical climate and, I hope, an insight into the military implications, both strategic and tactical. A text in itself is not enough. The subject must be taught formally by competent instructors at the outset of a leader's career — at the Royal Military College, at the CMF and ARA conducted officer cadet units — and repeated as opportunity offers, for example, at Staff College, the Jungle Training Centre and the Arms and Services schools.

Within the overall study of human performance in tropical

climates, there are critical facets which have a direct impact on the qualitative worth of a force.

Although there are many steps which the commander can take to reduce the effects of hot humid climates, the most important are:

(a) development of a higher level of acclimatization;
(b) ensuring a proper diet, especially water and, to a lesser extent, salt;
(c) Maintenance of a high level of physical fitness.

Of these three I believe it true to say that acclimatization, a most significant factor in determining comfort and efficiency, is least well understood. Acclimatization is a process of physiological and psychological adjustment to cope with the stress imposed by a tropical climate. There are definable limits to acclimatization. One can acquire it positively. Also there are levels of acclimatization and for combat troops it is worthwhile aiming for the maximum level for it increases tolerance to heat and arduous labour; performance and endurance at a lesser stress are also improved. It is feasible to condition a force about to go overseas before departure and this should have a bearing on the selection of concentration and training areas. Heat acclimatization persists for a measurable period after leaving the tropical climate.

The techniques for acquiring and maintaining a high level of acclimatization are well known and can be taught. An RMO will not always be at hand to undertake the necessary supervision. It is, in any case, a commander's responsibility.

A practical understanding of the principles and application of acclimatization is a pre-requisite part of a leader's military knowledge. The RMO's contribution to the maintenance of unit efficiency as affected by acclimatization will often be only as good as the leadership of the informed commander demands.

Nutrition is hardly a field in which a commander can be expected to be expert. But a knowledge of a few of the principles involved in feeding a force and the effects of hot, humid climates upon diet is well worthwhile. A proper diet in tropical areas, especially with regard to water and salt, can do much to raise efficiency.

When a man's body needs water, he ordinarily feels thirsty. His sensations tell him what he needs but, when sweating profusely, it does not tell him how much he needs. A man ordinarily drinks only half of what he is losing during active periods of exposure. It is not until the body is rested and cooled that the water loss is made up as a consequence of merely satisfying thirst.

In general hot-humid climates are more distressing than hot-dry climates. In desert the humidity is rarely high enough to inhibit the evaporation of sweat, so that, as long as water intake matches the rate of evaporation of sweat, cooling by evaporation is sufficient to keep the body temperature normal. In humid conditions of South-East Asia, evaporation of sweat is inhibited by the high moisture content of the air; it will frequently occur that, despite a flood of sweat, the body temperature continues to rise with the ultimate risk of heat-stroke. For tactical reasons it may not be feasible to slacken the tempo of activity. The commander in these circumstances should know the implications and what can be done. He will not necessarily adopt a wise course of action unless taught to do so. Experience, perhaps, is a substitute, but this takes time, possibly too much time, to acquire, and the price paid for experience can sometimes be costly. We have the knowledge at hand. All that is necessary is the initiative to apply it.

Loss of water is a problem usually far more serious than loss of salt. The average man in hot humid climates requires a minimum of about 8 to 11 pints of fluid a day. Working very hard, the same man may require up to 21 pints a day if he is to maintain best performance. Of course he can exist on less, provided he is prepared to be less efficient. He cannot train his body to function efficiently on less water.

Proper meals are essential for good performance. It has been my experience on patrols in New Guinea and Malaya that if a 30-minute break is taken in the middle of the day before attempting to eat solid food, appetite is largely restored and performance during the afternoon is markedly improved.

Generally speaking the chief nutritional problem in the tropics is likely to be not what and how much individuals ought to eat, but what and how much they are wlling to eat — and eat they must if high performance is to be sustained. Again the informed leader can assist greatly.

There are physiological limits to human performance and many of them can be defined in terms sufficiently practical for a conscientious commander or junior leader, given tuition, to grasp and apply. I would suggest that for most there is a good deal more merit in studying these human limitations than in studying the theory of small arms weaponry. The essentials of weapon training are to know how to fire and aim, not how the weapons (sometimes obsolescent) work. For professional handling of man-the-weapon, I believe it is essential to understand the limits of climatic stress which he can tolerate, the tolerable working rates, sleep and its relationship to efficiency,

and the significance of long-term attrition of efficiency due to the climate and combat stress. There will always be individual exceptions to the rules, but the commander is more concerned with the overall effect in the mass than in exceptional individuals.

During World War II, the term tropical fatigue ('troppo') had significant meaning for many a unit commander. This term should not be confused with battle fatigue, although the two are inter-related. There are many differing opinions concerning tropical fatigue, but the fact remains that tropical conditions (even without the stress of battle) do wear down the individual from a temperate climate. In some the onset of deterioration may occur in a matter of months; in others deterioration may be staved off for years. What then is the optimum tour of duty? How does the commander deal with this form of deterioration? This subject is worth more than a passing thought and there is study material available. Knowledge of this kind is no burden to carry.

It may seem pedantic to some to suggest that commanders should be taught how to evaluate a tropical climate. It is useful to know that the climatic stress in Malaya is relatively benign. Borneo is significantly more stressful, as are certain parts of New Guinea and Bougainville. There is no point in being taken by surprise as, I imagine, were the US marines when their first casualties in South Vietnam — as I recall it being reported in the Press — were the result of heat illness in one form or another.

Meteorological statistics are available from which the overall climatic stress can be evaluated. It is desirable to be able to recognize 'hot spots' such as lallang grass in Malaya and kunai in New Guinea, wherein the degree of stress may reach a level dangerous to health and so pronounced that loss of efficiency at all physical work must be accepted regardless of motivation. In some cases a prolonged stay in such hot spots can cause a lapse in mental efficiency — even hallucinations. I have seen ambushes rendered ineffective because individuals were held too long in tapioca fields in Malaya on a hot day. I have also seen ill-informed officers take, as an alternative, a course through lallang with their company or platoon and arrive at their objective not fit to fight. The 'professional' leader would have taken the longer but less arduous route through the shady rain forest or rubber plantation. Paratroops and helicopter-borne troops suddenly translated from the cool of the upper air to a gut-sapping heat at ground level can be so oppressed as to be temporarily unfit to fight unless precautions are taken. Many a patrol of fit,

young, well acclimatized troops has been reduced to dangerous non-effectiveness through ignorance of the most fundamental physiological (and psychological) aspects of man-management. Common sense with regard to the tactical situation and a sound knowledge of the principles involved in amelioration of environmental stress will always provide a sound and practical course of action for the conscientious professional leader in areas where the climate is a major factor.

Unless we take care to balance academic education with education in the realities of the battlefield we run the grave risk of producing leaders who will not be buffered against their untutored reaction to the brutality of war.

Kill or be killed is the antithesis of the Christian ethic — there is no genuine reconciliation between war and morality. Military leaders, if they are to remain aggressive and competent in battle, must develop a rationale to sustain them through the crises of combat. This does not mean that they must deny their humanitarian sensibilities, but rather that they must come to accept early that the ability to sublimate their compassion on the battlefield (not inherent in all) is an essential qualification in effective combat leaders. We should ensure that the emphasis on academic and cultural aspects of their training does not prejudice their training to the extent that it may be discovered, too late, that they do not have the stomach for combat.

Summary

The foregoing is a resume of some of what I believe to be neglected areas of formal study for the professional leader. It is by no means complete and each topic is dealt with only sketchily. However the material for detailed study, in one form or another, is readily available. Suitable instructors can be trained.

It is not logical that the novice leader should have to run the whole gamut of experience before his qualities as a leader can be assumed to be professional. He should be as professional as we can make him — *at the outset*. (Actual experience can then add to his degree of professionalism.) Not only his own life but the lives of those under his command might depend on it.

In much of South-East Asia the enemy will have an inherent advantage in that his knowledge of the environment and how to exploit it tactically will usually be superior, at least at the outset. We need every aid to counter the enemy's local

knowledge and superior field craft and I believe instruction along the lines indicated here would make a positive contribution. Knowledge of this type is no burden and it would be sufficient to learn the principles and, understanding their background, apply them as each differing situation demands.

Some leaders are born — good leaders are made. All should be taught as much as possible from the experience of others before they are thrust into a position to learn from their own experience. Only in this way can we be confident that our leaders are 'professionally' competent at the outset of their career in combat.

Furthermore, study with proper regard to human reaction to environmental stress, especially battle stress, could lead to refinement of our strategy, tactics and weapons, and would certainly lead to improved utilization of 'man-the-weapon'. And it goes without saying that, understanding our own human limitations, we will be better able to exploit similar frailties in our enemies.

Formal instruction, in the broad scope envisaged here, should be primarily for officers, given before or soon after graduation, repeated at the Arms and Services schools, the Jungle Training Centre and Staff College and be a basis for assessment.

As a word of warning I should add that before initiating a formal training programme, considerable thought should be given to the scope to be covered, methods of selection and training of instructors, the level down to which instruction should be given and the point in time at which instruction should be started. Too much said at the wrong time, out of context, by inexperienced instructors could undermine the natural aggressiveness and self-confidence of our combat commanders and junior leaders. Try we should, and the sooner the better, but let the initial move be carefully prepared. There is no room for amateurism when preparing leaders or soldiers for battle. □

MONTHLY AJA AWARDS

The Board of Review has awarded the $10 prize for the best article published in the December issue of the Journal to Lieutenant-Colonel J.H. Templeman for his contribution entitled 'Engineer Advice'.

The Use of Foreign Languages in Australasian Forces

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THE aim of this article is to review the uses of foreign languages to Australasian forces, not merely to justify our present linguistic ventures, but to clarify and augment them.

It is convenient to consider language study on three levels:

1. Colloquial;
2. advanced;
3. specialized.

Colloquial fluency in the language of the operational theatre was once a luxury. In World Wars I and II languages such as French, German, Arabic and Italian were little more than extras, at least while all went well, and were possibly of most service in the satisfaction of minor personal comforts. The local populace was not a major military factor and communication on a large scale was usually not vital.

The greater role of revolutionary warfare,[1] especially in South-East Asia, has brought about a situation vastly different. If it was not clear from the immediate post-war stages of the Kuomintan-Communist struggle in China,[2] it certainly became apparent in the French campaigns in Indo-China[3] that the local populace must be regarded as a potent military force, whose sympathy is essential. While the techniques for gaining such support are often as involved as they are various, it

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Sergeant Roy joined the 2nd Battalion, New Zealand Regiment when it was formed for service in Malaya in 1959. He learnt Malay and Mandarin during his service abroad, and after demobilization in 1962 studied French, Russian, English, Anthropology and Education at Otago University. He is also studying Law and AMI Mech E. He won the New Zealand Government's award for rocket design in 1965.

He rejoined the New Zealand Army at the end of 1964 in the Education Corps, and teaches Mathematics to Regular Force Cadets, Asian studies to cadets and young officers, and the Malay language at Post Graduate School and to camp officers.

He is a contributor of articles to The British Army Review *and other publications. He is a gifted linguist, proficient in Malay, French, Russian, Chinese (Mandarin and Cantonese — Sze-up), Maori and Temiar, and has some knowledge also of Polish, Dutch, Samoan and Sanskrit.*

cannot be denied that friendly communication between ordinary soldier and local inhabitant is an important means. A colloquial standard of speech, together with some knowledge of the local people,[4] not only helps to gain sympathy but enables the soldier to settle more easily into his new location (and as such is a worthwhile morale factor) and, of course, facilitates minor operations involving the local populace, such as patrolling, convoying and on-the-spot supplying and intelligence collecting.

An advanced knowledge of a language is required for formal liaison. While interpreters are always available, the continual co-operation between partisan groups, local armies and the operational force requires a personal relationship and understanding which is usually precluded by relayed conversation. Brigadier Davidson-Houston cites such an instance in the case of Lord French, who arrived in France as Commander-in-Chief of the BEF and was incapable of conversing with General de Lanrezac — who was equally ignorant of English — except through an interpreter. Serious misunderstanding subsequently resulted.[5] The importance of personal relationships between American advisers and Vietnamese Army officers in the present Vietnam situation is testified by people such as Lieutenant-Colonel Garman.[6]

A specialized knowledge is required for interrogation and general intelligence duties. Literal translation, of documents, pamphlets, etc., can be taxing enough to the linguist — especially when abbreviations and jargons are involved — but interrogation demands the most thorough and subtle understanding. Every language has its subtleties. Malay and *Bahasa Indonesia* have their deceptively simple systems of affixation and prepositional use which require an artist's feeling to express and detect the nuances of meaning — and truth! Chinese, in any of its major dialects, has a large number of sub-dialects, each with its particular idiom and style. An interrogator might learn much of value in distinguishing between the tempo and forcefulness of the Sze-up and Punyu sub-dialects of Cantonese, for example, even though they do have some distinct vocabulary. A Khmer linguist must have an extraordinary cultural background to his verbal knowledge in order to appreciate the abstruse allusions so effectively employed in that language.

One could go on.

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1. Colonel M. P. O'Hare, "Revolutionary Warfare" (*AAJ* No. 164, Jan 1963).
2. C. P. Fitzgerald, *Revolution in China* (London, 1952).
3. Bernard Fall, *Street Without Joy*, 3rd revised edition (Harrisburgh, Pa, 1963).
4. D. W. Roy, "Anthropology and the Soldier" (*British Army Review*, No. 20, Apr 1965).
5. Brigadier J. V. Davidson-Houston, "Speaking With Tongues" (*British Army Review*, No. 20, Apr 1965).
6. Lieut-Colonel G. A. Garman, "A Day in Vietnam" (*Army*, Feb 1965).

Having briefly looked at the *use* of languages, in the different degrees of fluency, let us now examine *what* languages.

No authoritative count of the languages at present spoken exists. There are more than 10,000. Even in Indonesia there are between 30 and 300 (depending on the language/dialect definition).[7] Quite clearly, with so many languages, selection is important.

One method of selection is to rate languages according to the numbers who speak them as their mother tongue. Here is such a rating compiled by Professor Potter, with approximate numbers:[8]

Chinese (including all dialects), 500,000,000.
English, 250,000,000.
Hindustani (including Hindi and Urdu), 160,000,000.
Russian, 140,000,000.
Spanish, 110,000,000.
German, 100,000,000.
Japanese, 80,000,000.
French, 75,000,000.
Malay (including Indonesian), 60,000,000.
Bengali, 60,000,000.
Portuguese, 55,000,000.
Italian, 55,000,000.
Arabic, 50,000,000.

While such a list is not to be ignored entirely, regional and political considerations must carry more weight. More than 110 million people may speak Spanish, but Malay, with its mere 60 million is of more use in the Australasian area. On the other hand, Russian is of little regional importance in the Australasian-South-East Asian area, and yet for political and numerical reasons it is a language which should be included.

With regional, political and numerical factors in mind, the following languages stand out:

Chinese — Mandarin (or Kuoyu).
— Cantonese.
Malay (including Indonesian).
Hindustani.
Russian.
Thai.
Vietnamese (Southern dialect).

A few others are of secondary importance:

Cambodian (Khmer).
French.
Japanese.
Burmese.

Eleven languages (or twelve counting English) are not categorically beyond the capabilities of an individual, but they certainly are to most. Accordingly, a further selection would need to be made on a campaign and fluency level basis. Colloquially Malay and South Vietnamese will predominate at the moment. At the advanced level, the two languages, together with Chinese, Thai and Hindustani, must be currently available. At the specialist level all eleven must be covered.

How do we measure up to these requirements?

At the colloquial level we are hopelessly inadequate. At the advanced stage, competent linguists are still in short supply. Specialists we do have, but once again in small numbers and often not directly "on tap" (that is, attached to universities and other Government departments).

It is not the purpose of this article to discuss the implementation of language teaching. It exists to a small degree already — Point Cook, Language Wing FETS Singapore, etc. — together with occasional short courses, e.g., Malay language classes at Waiouru, New Zealand.

Some incentives to individual language study exist, as with the language grants made in the Australian Army (but not at present in the New Zealand Army!).

With our battle role at present exclusively in revolutionary warfare, the wider understanding of such languages as Malay, Vietnamese and Chinese at the colloquial level is essential. Colonel O'Hare's excellent article on revolutionary warfare, cited earlier, is worth rereading to bring home the force of the situation. Not only may the lives of troops depend on their ability to speak the local language, but the whole outcome of the war may depend on it. In today's wars, "the real battle is for the souls of the people, not the bodies of the enemy",[9] and in this battle language is every bit as important as the rifle. □

7. C. A. Fisher, *South-East Asia* (London, 1964).
8. Simeon Potter, *Language in the Modern World* (Harmondsworth, 1960).
9. O'Hare, "Revolutionary Warfare" (*AAJ* No. 164, Jan 1963).

The influence of Mobility on Military Operations in South-East Asia

Major I. R. Way,
Royal Australian Engineers

Introduction

DURING the past two decades revolutionary warfare has been the predominant theme of military actions in South-East Asia. This form of warfare was used by Mao Tse-tung to conquer China. As a result of it the British expended considerable efforts to avoid defeat in Malaya, France was defeated in Indo-China and today the United States of America and some of her allies are deeply involved in fighting in South Vietnam.

Revolutionary warfare can be confidently accepted as the standard pattern of modern warfare which Russia and China will continue to practise, inspire or support in South-East Asia. Revolutionary war aims to overthrow the established government in a country. It is based on a close integration of political, economic, psychological and military actions. Similarly counter-revolutionary war is based on a close integration of the same actions. These actions must be pursued simultaneously since success in one sphere depends on progress in others. The total conflict never consists of military operations alone, and it is only for the purpose of a particular analysis that military operations can be discussed separately.

In military operations revolutionary forces must, among other things, gain and retain the tactical initiative. This is done by the exploitation of three potential advantages. The first is a detailed and intimate knowledge of the terrain where the fighting takes place. The second is a better intelligence

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Major Way graduated from RMC in 1953 and was allotted to the Royal Australian Engineers. He obtained his Bachelor of Mechanical Engineering at Queensland University in 1956, served for about six months with the Australian Component British Commonwealth Engineer Regiment in Malaya and was then posted for two years as adjutant of 4 Corps Engineer Regiment. After a year's engineer training in the United Kingdom he became an instructor at OCS (1959-61). In 1962, after a further year's training in the United States he was posted as instructor to the School of Mechanical Engineering. In May 1963 he was appointed OC 1st Field Squadron.

He wrote this paper as a thesis during his attendance at Staff College in 1965. His present appointment is DAQMG Singapore Base District.

network than that of the government forces. The third is greater mobility than that of the opposing military forces.

To the revolutionists, greater mobility implies that they can move throughout all parts of a region with greater ease than the opposing forces; that they can move on shorter notice with less fanfare and consequent loss of secrecy. It is the ability to concentrate forces, to strike the enemy and to withdraw to comparative safety before the enemy has time to organize effective retaliation. The nature of the problem that this poses to counter-revolutionary forces is well illustrated by the following passage describing the efforts of the British to suppress the Boer commandos in South Africa.

> To arrest broken bubbles of mercury was a similar task to that which at this time confronted Lord Kitchener's troops. In all parts of South Africa they were called upon daily to get sight of the invisible, to crush the impalpable and to surround nothing. The Commander-in-Chief already understood the nature of the problem before him. His heaviest blows, though they never failed to break up the enemy, did so into fragments so numerous and so full of vitality that there was not a soldier in the British forces but wished that they might be reunited into a body worth finding, worth striking, or capable of being found and struck.[1]

Our problem is to find and effectively strike the enemy. As General Grant has stated: 'Find out where your enemy is. Get at him as soon as you can. Strike at him as hard as you can and keep moving'. Hence the solution to part of the problem of achieving success in counter-revolutionary warfare is to gain a conclusive advantage in our ability to move and employ men and weapons against the enemy. This advantage will be conferred by tactical mobility.

Aim

The aim of this article is to analyse the factor of tactical mobility as related to modern warfare in South-East Asia and from a study of past campaigns to determine lessons pertaining to tactical mobility. With these lessons in mind, the effectiveness of the current Australian concept of divisional operations will be discussed. This concept of operations is directed mainly at the Active Phase of revolutionary warfare. It is not, however, intended to single out any one particular phase of past revolutionary campaigns for analysis. Lessons relating to tactical mobility can be learnt from all phases.

Analysis of Successful Revolutionary Operations

> The strategy should be that of employing our main forces in mobile warfare over an extended, shifting and indefinite front; a strategy depending for success on a high degree of mobility and featured by swift attack and withdrawal, swift concentration and dispersal.
>
> — **Mao Tse-tung**

1. *History of the War in South Africa*, 1899-1902, Vol. 4, p. 198.

Operations of Mao Tse-tung's Red Army

Mao Tse-tung's tactics were evolved during Chiang Kai-shek's Annihilation Campaigns from 1930 to 1934. They were fully developed during the 'Long Marches' and the Sino-Japanese war, and successfully employed to finally defeat the Kuomintang in 1949. Only the early phases of Mao Tse-tung's rise to power need to be studied to discover how communist tactics were developed.

The Annihilation Campaigns

Chiang Kai-shek mounted five annihilation campaigns in an effort to destry Mao Tse-tung's communist forces. In each campaign Chiang's forces were considerably superior to Mao's in numbers and equipment. Mao, however, was fighting in an area that he knew well and in which he had established a network of guerillas to harass the enemy and gain information. Chiang tried encircling tactics and all-out drives using concentrated strike forces. Mao, having superior intelligence, avoided being pinned in a positional battle and was able to choose the right time and place for attack. 'Our strategy is one against ten,' he said; 'our tactic ten against one,' and 'we should strike only when we are positively sure that the enemy's situation, the terrain, the people and other conditions are all favourable to us and unfavourable to the enemy. There will always be opportunities and we should not rashly accept battle.' By dispersed actions, feint attacks, long, concealed marches, quick concentrations and night attacks Mao's peasant army resoundingly defeated Chiang's first four annihilation attempts. Chiang never gained the tactical initiative; he was consistently surprised and never quite knew where Mao's forces were. Chiang was successful in defeating the communists in his fifth annihilation campaign. This was not due to a change in his tactics, but because the communists wrongly believed that they were strong enough to defeat the government forces by positional war.

The Sino-Japanese Campaign

The Chinese Nationalists tried to halt the Japanese by positional battles. As a result they lost thousands of lives and enormous quantities of equipment. Mao, by now extremely critical of positional battles, used a combination of guerilla and mobile war. Communist forces involved were the Eighth Route Army and the new Fourth Army. The actions of only the Eighth Route Army need be discussed.

This army of about 130,000 regular troops backed by a guerilla organization of some 500,000 operated in an area of

four provinces in north China. The communists divided this area into zones and within these zones established base areas. In most cases these bases were established in rugged inaccessible mountainous areas. Most of the fighting consisted of small-scale guerilla-type operations conducted from these bases, although co-ordination was at a high level. The Japanese countered the Chinese actions by advancing along railroads and roads and capturing vital points. These vital points were protected by forts. This method created vulnerable lines of communication and did not effectively establish control, since the Chinese still had freedom of movement in the area. Later the Japanese learnt to combine small highly mobile elements with their positional elements. Although these new tactics proved more successful, the Japanese were still hampered by a lack of knowledge of the terrain and the enemy. By the time of the Japanese surrender the communists still held the initiative, even though eighteen of the thirty-six Japanese divisions in China were placed in the north to counter the Eighth Route Army.

The War in Indo-China (1946-54)

The war commenced in 1946. By the end of 1949 it was still in the purely guerilla phase. The widely scattered Vietminh forces lacked the necessary degree of support of the local population. They lacked modern equipment and weapons and the main striking forces that are essential for final victory.

Within a year they were able to pass from the Passive Phase to the Active Phase. The necessary popular support had been gained and regional and regular forces had been built up. It should be noted, however, that they still lacked modern equipment and weapons. At this stage thousands of French troops were tied down in the static defence of the fortress barrier that had been constructed in North Vietnam. The Vietminh controlled the surrounding jungle and took full advantage of it for manoeuvre and surprise. Concentrating at will, and making maximum use of ambushes to destroy relieving forces, the Vietminh swept along the frontier road, overcoming fort after fort. In six weeks they had secured 100 miles of the border with China. This established a direct link between China and the northern mountains of the Red River Delta which was already a Vietminh sanctuary.

The Vietminh forces, under General Giap, then made a serious error. At Vinh Yen they attempted to defeat the French in a 'set-piece' battle and failed dismally. It is probably true to say that this battle led the French to believe that they could beat the Vietminh anywhere in a set-piece battle; this

belief certainly seemed to dominate French strategy for the rest of the war. After Vinh Yen the communists reverted to the passive stage of revolutionary war. They were prepared to wait and had cast aside the idea of a quick war and a swift victory. While the French continued to build strong points, the Vietminh went to work on the local population. Slowly the communist forces were built up in the Red River Delta. By late 1952 they held about half of the villages and the tactical initiative in spite of French mopping-up operations. The French forces were dependent on the roads running through the padi. The Vietminh cut these roads; the French spent the days re-opening the roads and their enemy spent the nights again destroying them when the French had to withdraw to the security of their strong-points One by one French forts outside the delta were demolished by night attacks and French troops were systematically annihilated by ambushes.

At this stage the Vietminh, exploiting their advantage of freedom of movement, dispersed the French forces by a series of threatening moves against Laos and Central Vietnam. The communists, however, could not be forced to do battle on ground or in circumstances not of their own choosing. Late in 1953 the French decided to occupy Dien Bien Phu to restrict enemy movement into northern Laos and to create a sufficiently attractive lure to draw General Giap's regular divisions into a positional battle. Giap accepted the bait, but only because he knew that with sufficient preparation he could defeat his enemy. In the closing months of 1953 and early in 1954 the communists launched a multiple campaign against the French. Vietminh forces, which had been safely plotted in one part of the country, suddenly sprang from the jungle hundreds of miles away to attack one French position after another. Some of their units marched more than 1,500 miles to spread the war to all parts of the country. Others moved in complete secrecy for 600 miles along the Ho Chi Minh Trail. The French tried to counter the numerous threats and thus Giap succeeded in neutralizing the bulk of the French reserves. He now mounted his attack on Dien Bien Phu. The French were convinced that they could hold Dien Bien Phu even though they were relying completely on air supply. They did not consider that the enemy had the ability to move in sufficient artillery to neutralize their aircraft. This, however, is exactly what did happen. 'Our troops,' wrote General Giap afterwards, 'cut through mountains and hacked away jungle to build roads and haul our artillery pieces to the approaches to Dien Bien Phu. Where roads could not be built, artillery pieces were moved by nothing but the sweat and muscles of our soldiers.

Our artillery was set up in strongly fortified firing positions, to the great surprise of the enemy.'[2]

Dien Bien Phu fell on 7 May 1954. The effect was disastrous. Its fall broke the will of the French to continue the war and hostilities ended on 20 July 1954 after a cease-fire had been negotiated at Geneva.

Before leaving the war in Indo-China it is necessary to discuss the operations of the French Group Mobile 100 (GM100). Their operations took place on the southern mountain plateau of Vietnam early in 1954. Vietminh activity on the plateau at this time was part of Giap's multiple campaign, mentioned above. The operations of GM 100 are an excellent example of the French attempt to match Vietminh mobility on foot with mechanized mobility.

GM 100 was a highly mobile regimental task force of all arms. It was one of the best and heaviest units of its type. It was well experienced in battle, well equipped and well trained. Its task was the defence of the plateau. For six months GM 100 tried in vain to fix and destroy the two Vietminh regiments operating on the plateau.

> The enemy . . . again melted away into the jungle. Footsore and weary, plagued by mosquitoes and leeches, pushing and dragging its artillery, tanks and vehicles, the GM advanced . . . to attempt to seal off the elusive 803rd or 108th Vietminh regiments — whichever would stand battle. After several days of rain, the unimproved road . . . had turned into ankle deep mud which the vehicles of the Group promptly churned into a bottomless quagmire. In the searing damp heat, the men kept pushing forward with the strength of despair — the enemy had to be somewhere.[3]

The Vietminh never lost the tactical initiative, and moving rapidly across country forced the GM 100 successively to deploy in widely separated areas. As a result the Group covered close to 2,000 miles during the six month period of its active existence.

The very organization of the Group, designed to provide a hard-hitting highly mobile force, was its most serious limitation. The mechanical mobility it possessed made it road bound. Roads in the area were easily ambushed, were few in number and generally were in poor condition. The relative mobility of the two forces is well illustrated by the fact that 803rd Regiment attacked the Group and was ready to attack it again six days later. The 803rd Regiment had covered about 50 miles through the jungle in less time than it took the GM 100 to travel 95 miles by road to arrive at the same place. Colonel Barrou,

2. Vo Nguyen Giap, *Dien Bien Phu* (1962), p. 32.
3. Bernard Fall, *Street Without Joy* (1961), p. 179.

commanding officer of the Group, later wrote that 'the very means of support and co-ordination which make the strength of the GM also create some enormous complications in a mountainous area where roads are rare and of poor quality.'[4]

These examples have shown that tactical mobility is the key to enemy operations, from the small actions of the guerillas to the larger actions of the regular forces. Four major factors, relating to the enemy, are important:

(a) In the Passive and Active Phases, he lacks a superiority in numbers and must employ the strategy of 'one against ten' and the tactic of 'ten against one'.

(b) His equipment and weapons are relatively poor.

(c) He has gained the support of the local population in his area of operations, particularly in the latter phases of war.

(d) The terrain in his area of operations is well known to him and generally facilitates his concealment and hampers the operations of opposing forces.

Taking these factors into account, the enemy has developed tactics that are essentially infantry tactics. He has balanced his lack of sophisticated equipment by the use of favourable terrain. A good road and communications network poses a serious problem to the revolutionist. He knows that government forces can quickly concentrate against him and get behind his lines of retreat. Such conditions do not generally apply in South-East Asia. Roads are few, and the terrain and weather are such that vehicular cross-country movement is restricted. In essence the environment reduces the capacity of the better equipped and better armed government forces to a level where the scales are balanced.

Heavy reliance on infantry means that enemy combat units are not encumbered with heavy equipment and thus require minimum support from the service units. The requirement for minimum support is further facilitated by support from the local population. Enemy units therefore are not road bound, nor are they always tied to particular base areas. Thus they can perform cross-country marches with considerable ease and speed and can conceal their units more easily from detection from the air. Except for a few occasions, the French air superiority in Vietnam was of limited usefulness.

Overall, from the military point of view, these basically infantry tactics were what the terrain and the situation demanded. The pattern is one of rapid movement (preferably at

4. *Street Without Joy*, p. 173.

night), dispersed deployment, concentration for massive but brief attacks and quick disengagement from actions with doubtful prospects. Counter-revolutionary forces never grasped the significance of the communist tactics and thus never developed the right counter tactics. The enemy thought in terms of a war of no fronts, related to the people and the countryside, while government forces continued to rely on their superiority of weapons and equipment and thought in terms of positional warfare related to the towns and the roads.

Analysis of Successful Counter-Revolutionary Operations

In Malaya and the Philippines Communist movements made strong bids for power through revolutionary warfare. These bids failed, but only after the governments of both countries had been forced to fight long and hard campaigns.

The Malayan Campaign

There were limitations to the development of revolutionary warfare in Malaya. The countryside was unable to provide food for large-scale jungle forces. There was no neighbouring communist state to give support and the Malayan communists did not carry out a programme of political indoctrination of the villagers, but relied mainly on intimidation to gain support. Although the guerillas or terrorists at one stage numbered some 5,000, there was no attempt to concentrate to destroy even one British battalion. The revolution was small scale and amateurish in comparison to the efforts in China and Indo-China.

Since food was scarce in the jungle, hunger forced the terrorists to come to the villages. The British moved large numbers of civilians from the fringes of the jungle to new villages that could be defended and thus were able to reverse the traditional game of ambush. The lack of readily available local support limited the freedom of movement of the terrorists and facilitated British counter-measures.

Initially the British tended to counter the communists with large-scale operations to clear suspected areas. They soon realized that the answer lay in dividing the area into sectors, holding vital base areas within these sectors, and destroying the enemy by small-scale operations, basically ambushes and patrols. It is worthy of note that at the height of the operations about 5,000 terrorists were being hunted by some 230,000 regular soldiers and police. This is an overwhelming majority. One must remember, however, that over two-thirds of Malaya is covered by jungle and this jungle was the equalizer. In this labyrinth it took 1,000 man hours of patrolling to make one

contact and 1,500 man hours for each terrorist killed. By experience the British learnt that the success of small-scale patrols in the jungle depended largely on junior leaders with initiative and aggressiveness, a high standard of marksmanship, good jungle navigation and a sound knowledge of jungle craft. Development of these qualities required considerable training and practice.

It should be noted that air support was used extensively to facilitate mobility. Helicopters were successfully used to position patrols, evacuate casualties and, in some degree, to deliver supplies. Fixed wing aircraft were invaluable for reconnaissance and air supply.

The Philippines Campaign

The communist movement in the Philippines suffered from much the same limitations as the movement in Malaya. Similarly the nature of communist operations was much the same as in Malaya.

In 1950 the government abandoned its plan of placing small garrisons in threatened areas to counter the guerillas. Thenceforward military areas were established and these areas were divided into sectors. Within sectors, forces were stationed to secure key points and mobile ground forces allotted to destroy the guerillas. These ground forces covered their sectors by patrols supported by strong mobile reserves. Armed air reconnaissance and scout teams were used to find hiding places, limit enemy movement and prevent construction of large bases. Generally the operations in the Philippines were based on small unit tactics and 'most of the sophisticated methods of modern combat, it was found, could not do the job of the traditional infantryman, and they were dropped'.[5]

Close air support was effectively used in this campaign. Good communications were found to be essential, but often targets could not be identified from the air.

In both Malaya and the Philippines successful operations were based on a combination of close territorial control and mobile striking forces. Mobility was an important factor in determining the tactics necessary to deal with a guerilla force operating in small bands in rugged wild country. To operate effectively in these circumstances, small unit infantry tactics were required. Patrols, properly trained, well led and supported by mobile reserves, defeated the enemy. Air supply was necessary if these patrols were on prolonged operations. Helicopters were invaluable for deploying troops and evacuating casualties.

5. Franklin Mark Osanka, *Modern Guerilla Warfare* (1962), p. 197.

Close air support was often necessary if fire support was required.

Lessons from Past Campaigns

The main lessons which emerge from the above campaigns are:

(a) In a war of no fronts, mobility is the key to successful combat operations. Without mobility one cannot hope to have the necessary flexibility to be able to move and concentrate forces when and where required and thus gain and retain the tactical initiative.

(b) The close alliance of the local population to the revolutionary cause poses a threat to the security of movement of our combat units. Surprise is essential; to achieve it our forces must be able to move across country by day and night through all kinds of terrain, avoiding roads, tracks and villages.

(c) The terrain and climate of South-East Asia pose special problems as far as mobility is concerned. To overcome the difficulties of terrain and weather we must:
(i) Rely mainly on lightly equipped infantry combat units. Armour and artillery units should be used whenever possible, but the environment and nature of the threat will limit their use.
(ii) Achieve a high degree of training, leadership and morale.
(iii) Make maximum use of available local means to increase mobility. Local means include river craft, animals and porters.
(iv) Make maximum use of air support.

(d) Air support can facilitate mobility by:
(i) Transport of troops and heavy weapons quickly over difficult terrain.
(ii) Resupply, thus reducing the administrative elements that accompany a force and allowing the force to operate relatively free of fixed lines of communication.
(iii) Providing close air support, thus allowing the force to move without being encumbered by organic heavy fire support weapons.
(iv) The rapid movement of reserves.
(v) Evacuating casualties.

(e) Dispersion is essential to the revolutionist and he will cover a wide area. We must not disperse ourselves over

an area so wide that we cannot control it or defend it against an enemy who can quickly concentrate. The ratio of space to forces is a critical factor. In considering forces we must take into account the terrain, our relative mobility and our relative strength. Based on these considerations we must determine in order of priority the areas we can effectively cover in our military operations. These areas must then be covered by a combination of garrison and mobile forces. Static defence in the combat zone must be avoided. Only bases that are necessary to promote mobility should be established and within these bases administrative elements should be reduced to the minimum.

Present Concept of Divisional Operations

The present Australian concept of divisional operations in counter-revolutionary warfare stresses the importance of mobility to achieve surprise, flexibility and concentration of forces. It emphasizes the need for mobile defence, austerity in all aspects of administration and the physical mobility of units to enable us to operate in the South-East Asian environment independent of roads and tracks. The concept relies heavily on aircraft for tactical movement, heavy fire support and logistic support. The new divisional organization caters for all these needs. To provide the necessary airlift in the divisional forward areas, the primary aircraft employed will be RAAF helicopters.

The lessons of past campaigns have been well drawn in the present concept. One should bear in mind, however, that the lessons derived in the use of helicopters in South-East Asia were based on the small-scale operations in Malaya and the Philippines. Since we are now involved in operations on a much larger scale, the heavy reliance on helicopters for troop movement, resupply and casualty evacuation requires further analysis.

Development of the Air Mobility Concept

This concept has been developed as a result of the difficulty of vehicular movements in South-East Asia. Ever since the development of the wheel, man has been endeavouring to improve his ability to travel in a vehicle on the ground. Today, new types of vehicles, and in particular tracked vehicles, have been developed with improved cross-country performances. Their performance, however, is not good enough to overcome all the problems posed by the South-East Asian environment. The cold hard fact is that improvements in vehicular mobility

have only been marginal, and where movement by vehicle is possible, security is difficult to achieve. To overcome these problems, the division is depending on helicopters for much of its movement and resupply in the combat zone.

The advantages of the helicopter have already been covered and it would appear that their use has solved the problem of mobility in forward areas in South-East Asia. What are the disadvantages associated with their employment?

Examples of the Use of Helicopters in Vietnam

On 2 August 1962 Operation LAM SOM I (Sure Win) was conducted. This operation consisted of a raid to destroy a known enemy camp by landing a main force of 200 men and a diversionary force of 30 men in one total lift of 32 helicopters. A pre-planned air strike preceded the landing. The operation was successful. The troops achieved surprise and spent only 3½ hours on the ground. Casualties amounted to 3 men and not one helicopter was hit.

A month later a similar operation, Operation LAM SOM II, was launched. The plan was to use two waves, each of 22 helicopters, to land troops on the landing zones. Ground fog delayed the landing, but unfortunately the pre-arranged air strike went in as planned. Surprise was lost. When the troops finally landed the enemy were able to bring fire to bear on the selected landing zones and the action developed into a series of brief and vicious fire fights. Difficulty was experienced in getting the forces into and out of the area. Troop casualties amounted to 10 per cent; two helicopters were lost and almost all others engaged were hit at least once.

The lessons learnt from these two operations are:

(a) Helicopters are a practical means of reaching and surprising the enemy.

(b) Landing zones are difficult to select in rugged country. The limited number of suitable sites may prejudice surprise and security. Alternative zones should be selected whenever possible, and different landing zones should be used to pick up troops after the operation.

(c) Maximum firepower should be used to protect helicopters into and out of landing zones.

(d) Rapid movement of troops from landing zones is essential and sufficient troops must be landed in the first wave to secure the landing zone.

(e) Joint control of ground and air forces is essential and controlling elements can be located to advantage in one aircraft flying over the area of operations.

Disadvantages of Helicopters

The disadvantages of helicopters are vulnerability and lack of reliability.

(a) *Vulnerability*. The example of Operation LAM SOM II shows that helicopters can be vulnerable in the air, particularly when approaching or departing from landing zones. However the lessons learnt from this and similar early operations have resulted in improved methods of using helicopters in the tactical role. An analysis of operations in Vietnam shows that between 1 January 1962 and 30 June 1965 about 750,000 helicopter sorties have been flown. The casualty figures for aircraft show that 1,897 helicopters have been hit of which 96 were shot down. Of these 96 only 49 were a 'write-off.' Casualties to troops were 108 killed and 579 wounded. These figures are surprisingly low and certainly indicate that helicopters are not vulnerable when correctly used. However it must not be forgotten that the enemy has no air capability and his air defence means are limited. It is unlikely that the enemy will gain an air capability but it seems likely that his air defence capability could easily be improved. Such an improvement would limit the use of helicopters. Another aspect is base vulnerability. In a war of no fronts, the problem of basing helicopters presents many difficulties. Helicopters are attractive targets and hence security of their base is essential. Helicopters must be serviced and this probably will have to be done at night, using lights. The problem of providing a secure base for helicopters rests with the ground commander. To protect effectively these bases while still carrying out the primary mission of destroying the enemy will mean that the number of base areas must be limited. As a result helicopters will be operating basically from a few central bases and there may be delays in response to requests for support, unless the support is pre-planned. In view of the short range of helicopters, even pre-planned support may involve the temporary operation of helicopters from forward landing zones, and the problem of balance of forces will remain. Overall, the vulnerability of helicopter bases will limit the degree of support available to ground forces.

(b) *Reliability*. To the ground force commander, reliability means that the aircraft will be able to perform their task during the hourly and daily conduct of operations.

The factors affecting this reliability are terrain and meteorological conditions and availability.

(i) *Terrain and Meteorological Conditions.* South-East Asian conditions of terrain and weather are not ideal for flying. However, even though low-level flying may be hazardous in some areas and weather may preclude flying at certain times, in general air operations using helicopters are not hampered to any great degree. Recent tests in the United States with the new 11th Air Assault Division indicate that extensive operations can be conducted in weather conditions of 300 feet ceiling and a half mile visibility. The problem of night flying is yet to be solved. Theoretically, the available aircraft have a night flying capability, but the major problem is landing, and generally night operations are still difficult to conduct.

(ii) *Availability.* The ground forces must have airlift readily available when it is required. It has already been shown that the factor of base vulnerability may restrict the timely availability of aircraft. Further factors are national resources, aircraft servicing and fuel requirements. One often reads that we should meet the challenge of cost, servicing and fuel or be defeated. The statement is sound in principle. However meeting the challenge is not as easy as it sounds. The high initial cost of helicopters, a servicing system relying on a costly and complex system of spare parts and highly skilled technicians, and a large fuel bill will always place limitations on the availability of aircraft for tactical missions.

Summary of Present Divisional Concepts

The present divisional concept for counter-revolutionary operations is sound. It must be remembered, however, that helicopters will not solve all the problems of mobility. There will be limitations on their use and operations will have to be carefully planned to overcome these limitations. Within their limitations helicopters will provide speed in movement, surprise and flexibility. Helicopters must therefore be accepted as another, though superior, form of transport to give mobility in the South-East Asian enviroment. Other means of transport will still be required; to go by foot may be relatively slow but it is a relatively sure way of moving regardless of terrain. Finally, it must be remembered that in most cases the soldier still fights on the ground and not from a vehicle, be it a ground vehicle or an aircraft.

Conclusion

Mobility is the key factor in military operations in modern warfare.

In the past campaigns in South-East Asia, revolutionary forces have developed tactics that have given them greater mobility than that of the forces opposing them. They have used their superior mobility to gain and retain the tactical initiative.

To defeat the revolutionary we must gain a conclusive advantage in tactical mobility. To achieve this our military operations to defeat the enemy must be basically fluid infantry type operations, mounted from secure bases. Therefore we must equip our combat units so that they can achieve maximum mobility in the South-East Asian environments. This implies light scales. Equipments and elements that bind a unit to a road must be discarded. Regardless of how well we equip our units it will be difficult to achieve a decided advantage over the enemy in foot mobility since his knowledge of the terrain cannot be bettered and because he will have the support of the local population. We can, however, combine ability in cross-country movement with the advantages in mobility that helicopters confer to achieve a conclusive advantage and thus wrest the tactical initiative from the enemy. It must be remembered that helicopters are not in themselves the complete answer. They are a superior vehicle for the movement of men and supplies, but they have limitations. We must not develop a state of helicopter 'alcoholism' that renders us ineffectual when helicopter support is not available. Other means of transport, in particular armoured tracked carriers and the means available locally, must be used whenever practicable.

Co-operation with the RAAF must be fostered and fully developed. Since artillery often will not be able to be positioned to give support to infantry units, close air support will frequently be necessary. With practice, accurate close air support can be achieved, even in jungle conditions. It was achieved, for example, in the Burma campaign 'where our fighters would place their cannon shell and rockets within a hundred yards of our men'.[6]

The current Australian concept of divisional operations shows that the lessons of past campaigns have been well appreciated. The concept is good provided that helicopter support is carefully incorporated into combat operations. It remains then for us to be able effectively to apply the doctrine. This demands well-trained troops with high morale, and aggressive leaders with initiative and flexible minds. □

6. Field Marshal Sir William Slim, *Defeat Into Victory* (1956). p. 544.

Will China intervene in Vietnam ?

Sergeant D.R. de Mamiel,
Australian Regular Army

WILL the west have to contend with direct Chinese intervention in Vietnam? This is one of the crucial questions that poses itself in any estimate of the present conflict. This paper attempts to spotlight some of the problems and provide an appreciation of the situation based on the known factors involved.

Situation in North Vietnam

First, let us examine the present situation in North Vietnam. The advent of the war into the North has a serious aspect, one that vitally interests and affects China in that it brings the war closer to her borders.

(a) Under normal conditions the economic stability of North Vietnam is precarious. At present the high cost of military preparedness, increasingly damaging bombing raids on the country's industrial heart and lines of communication, and the acute shortage of food have combined to threaten seriously the present and future welfare of the nation if not its actual entity.

(b) In addition to the economic crisis, North Vietnam, in the face of continuously increasing bombardment that it is powerless to resist, initially experienced apprehension and defeatism leading to a widespread lowering of morale. This position has improved with the adoption of various defensive measures designed to combat the paralysis engendered by the bombing raids. With the success of some of these measures and egged on by exhortation and propaganda from Hanoi, a stiffening of the will to resist is emerging; the population has begun to regain its former poise and it is evident that they can endure much more than was at first realized.

Sergeant de Mamiel enlisted in the ARA in 1955 and for the next three years served with the School of Survey Balcombe, and AHQ Survey Regiment, Bendigo.

He served with HQ Tasmania Command (1958-61) and with HQ Southern Command (1961-64). He is currently serving with 81 (Fighter) Wing RAAF, Williamtown, NSW, on ground liaison duties.

However, with the extension of bombing raids to targets previously immune they may revert to the former state of depression should their Government prove unable satisfactorily to counter the bombing.

(c) Unless agreements are reached by negotiation — a remote possibility at this stage despite recent overtures — these vital problems may force Ho Chi Minh to surrender the direction of his country to the only force capable of stemming the southern offensive — China. In fact, should circumstances require it, this decision will probably be taken out of Ho Chi Minh's hands.

China's World Image

This state of affairs alone may not be sufficient to influence China to commit her own forces to the conflict, but when the weighty problem of China's world image is added to the scales the possibility of direct intervention is increased.

China's image and her hopes of continued prestige among those nations she wishes to influence — particularly the Afro-Asian bloc — have been seriously weakened by recent major political reverses: her failure to exploit the India-Pakistan conflict; the anti-communist turmoil and disintegration of the Communist Party (PKI) in Indonesia; the steps taken against Chinese pressure by member nations of the oft-delayed Afro-Asian Conference and the premature assumption of loyalty from the new Algerian leader, Colonel Boumedienne. Although the deadlock vote in the United Nations' Assembly on China's admission to the UN gained her some ground, China's overall prestige will plummet disastrously should she allow North Vietnam to be trampled on, markedly so after repeated denunciation of United States' intervention in Vietnam and continued threats to duplicate her actions in Korea should this continue.

The Sino-Russian idealogical conflict has a large bearing on this situation and could affect the outcome in three ways.

(a) China may need to use a 'show of force' to gather support in this dispute with Russia. Vietnam is a made-to-order situation should this become necessary.

(b) Should the North be defeated without Chinese aid the Russian position would be immeasurably strengthened and would probably gain support from the very elements that China wishes to influence, holding the Chinese up (to adopt their own phraseology) as a 'paper tiger'.

(c) North Vietnam's defeat, in spite of Chinese aid, would be a catastrophe for China in many ways. Russia would definitely hold the trump hand; the Chinese leaders and idealogy would be in disrepute. All this could lead to a 'new broom' among the heirarchy and associated policies, if not to the nation as a whole.

Prelude to Intervention?

In recent months certain events on the Chinese mainland have suggested that preparations for intervention have commenced. This may be a purely strategic manoeuvre on China's part to confuse the issue, but cannot be disregarded. The instances worthy of note are:

(a) Continued broadcasts from China prophesying a duplication of Chinese action in Korea should the United States increase their 'aggression' in the North.

(b) The appointment of Chou Hsing as new provincial governor in Yunnan. Chou Hsing is the former Deputy Chief of Security. The fact that he has been promoted over the heads of several more senior deputy governors suggests that he has been chosen for a more important task in the province that shares a common border with North Vietnam and Laos.

(c) Closure of certain airports and southbound railway lines to civil and commercial traffic for specified periods to enable the transfer of war material to the North Vietnamese border.

(d) Efforts are currently being made to improve the Yunnan lines of communication with its southern borders in Laos and North Vietnam.

(e) Intensified training of both regular and militia forces in the southern provinces has been observed.

(f) Pronounced stepping-up of the fortifications on the island of Hainan at the tip of the Luchow Peninsula — the southernmost point of the Chinese mainland — 150 miles due east of the North Vietnamese coastline in the Gulf of Tonkin. One estimate of this build-up suggests that the strength of regular troops on the island has been increased to five divisions; the air force has doubled its size and now comprises about 88 aircraft; naval forces, i.e. submarine and patrol boat units, have been concentrated at Yulin on the south coast. Underground road-rail systems and aircraft hangars and runways have been constructed to limit the effects of a nuclear attack on these key installations

and the air-defence weapons system has been increased also.

(g) Propaganda measures to ensure the psychological preparedness of the nation for action in the event of conflict — even nuclear conflict — as a recent statement by General Lo Jui-chin, the Chinese Chief of Staff, implies. 'It is time' he said, 'to make a "realistic" preparation for nuclear war so that come what may we shall be in a position to cope.'

(h) Reported evacuation of the civil populace from strategic border areas.

These events may be construed as defensive measures to protect China's southern borders from United States reprisals. However, as China has not yet committed any overt act warranting American reprisals on Chinese territory, it would appear that they are not purely defensive. Other events worth recalling are:

(a) The meeting in May 1965 between Lo Jui-ching (mentioned above) and General Vo Nguyen Giap, which reportedly resulted in Chinese approval for an increased offensive in South Vietnam. The massing of Viet Cong for attacks on Dong Xoai and increased activity in many other sectors following this meeting is significant when related to Chinese reservations about similar action earlier in 1965, and bears out this report of Chinese influence in tactical decisions.

(b) The three-week visit to Peking and Moscow in October-November by the North Vietnamese Premier, Pham Van Dong. This has given added impetus to the 'change-in pace' of the conflict and the adoption of a countering military build-up by the Communists in the South, exemplified by the commitment of more North Vietnamese regulars to this theatre and their continuing stand against Allied and Government forces, despite heavy losses.

(c) The return of General Nguyen Chi Thanh. He was the only other full general, together with Giap, in the Vietminh during the Indo-China war. After the cease-fire he was made responsible for North Vietnam's land collectivization programme. After the failure of this enterprise, he was employed on liaison duties with China and has now returned as a political commissar and a firm supporter of Chinese strategy, with considerable backing from the Chinese High Command. His re-emergence appears to threaten the position of

Giap, who has been made the scapegoat for the recent military reverses suffered by the North, and is again a firm pointer to Chinese influence in the present conflict, if not partial direction of it.

Economic Structure

To date we have dealt with factors that may bring about Chinese intervention. The basic economic structure of China and her economic ability to wage war should also be considered.

China is endeavouring to stabilize the balance between her mainly agricultural southern and central regions and the industrial areas of northern China and Manchuria. Previously the development of these areas was not in accordance with the mutual needs of the various sectors, which resulted in over-production of some commodities at the expense of other necessities.

Agricultural production, despite the reportedly satisfactory rice harvest this season, still falls short of the national need, especially in meeting the requirements for military stockpiles, and has forced China to import large quantities of grain from other countries. This situation is unlikely to improve for some considerable time. Attempts to revitalize the soil and the introduction of more modern methods of production are steps in the right direction, but the advances here gained are offset by the ever-increasing rise in population.

Industrial production since the collapse of the 'Big Leap Forward', remains in a state of recession. Priorities are given to those industries concerned with the production of agricultural needs — for example, chemical fertilizers, irrigation equipment and farm machinery as opposed to heavy industry in other spheres. Even here, however, the supply is well below the demand. The exception to this system of priorities is armament production, with the emphasis on progress towards an effective nuclear capability.

The dangers of boosting secondary industry at the expense of agriculture were driven forcibly home with the failure of the 'Big Leap'. With the recovery from this slump, the stage has now been set for the projected 'Soaring Leap Forward'. Nevertheless, the existing economic instability will make it most difficult for China to support any conflict other than a limited war for any considerable period of time. A conflict against an enemy with the economic and industrial potential of the United States would place China at a marked disadvantage unless supported unstintingly by the Communist bloc.

Chinese Military Machine

The economic picture does not suggest a firm enough basis on which to support a war intervention against the military might of the United States. However China's own military might must not be under-estimated, despite the economic difficulties.

Composition and Strength of Armed Forces

China has a greater number of people under arms and effectively trained for war than any other nation. The regular ground, sea and air forces collectively grouped under the one nomenclature — the People's Liberation Army — have an estimated strength of about 2.8 million. Added to this is a militia force of about 12 million, largely composed of members wth previous military experience and training, and some with actual combat experience.

The basic break-up of the regular forces is as follows:

ARMY: Thirty-five field armies, each containing about 40,000 personnel. Four of these armies are deployed along the northern borders of North Vietnam and Laos, with (as previously mentioned) a further army located on the island of Hainan.

AIR: The Chinese air force — assessed as third largest in the world — numbers about 2,900 aircraft. Quality, however, does not match quantity.

NAVY: Estimates of Chinese naval shipping are inconclusive, but assessments from various sources have established a basic figure all told of about 1,000 gunboats, minesweepers and armed junks, plus 30 submarines of varying capacity and four destroyers (obsolescent Soviet vessels). It has about 75,000 personnel and incorporates an aviation branch.

Services Armament and Capabilities

ARMY: The Chinese soldier is well trained in both conventional and guerilla warfare and is a formidable enemy in any theatre. Weapons and equipment available for individual issue to the foot soldier are adequate, but do not incorporate the technological advances of those items available to Western forces. Basically the quality of these weapons which are mainly patterned on Soviet weapons of World War II vintage has improved little since the Korean conflict. Some reproductions of present infantry weapons in the Soviet forces are being manufactured, but the scale of distribution is

limited. Support weapons such as artillery, mortars, rocket-launchers and recoilless rifles are comparable to our own, but the armour, mainly copies of Russian T-34s, is of Korean war vintage and therefore obsolete.

AIR: The 2,900 aircraft at China's disposal consist mainly of obsolescent MiG 15 and 17 jet fighters, with a few MiG 19 and 21s. They have about 300 Russian-built twin-jet Iluyshin-28 bombers, but as these do not have a supersonic capability their importance is largely reduced. The remainder comprises a few propellor-driven bombers, transports and reconnaissance aircraft. Add the disadvantages of fuel shortages and the lack of maintenance facilities and spare parts to the picture and it is evident that this obsolescent force would be incapable of controlling air space — either in defence or attack — when opposed to superior Western aircraft.

NAVY: Based on available estimates, it is considered that China's naval potential is severely limited and suitable for coastal defence only. Even in this sphere it recently proved ineffective in the clash with Taiwan naval shipping. The submarine force would have scant success against craft fitted with anti-submarine detection and defensive devices.

Economic and Logistic Support

(a) *Lines of communication.* The existing road-rail system in Yunnan, the province bordering North Vietnam and Laos, would offer serious delays in the transport of vital war material and troops to this area. The present facilities cannot be compared with the favourable road-rail complex in Manchuria that was used for the Korean campaign.

(b) *Transport.* The capability of air transport, despite the existence of airborne divisions, is restricted, due to the quality and obsolescence of the available aircraft. Links limit the rail capacity. Estimates of rolling stock are not available. Lack of heavy road transport is also a restrictive factor.

This transport situation can be partially offset by a build-up of necessary troops and supplies before actual involvement in fighting. This build-up is reportedly taking place as previously mentioned and is a further pointer to China's preparedness.

(c) *Arms Manufacture.* Industrial weakness and lack of modern technology are drawbacks to the production of heavy armament. The existing economy precludes rapid production of an atomic stockpile as well as sophisticated missiles. Should heavy losses of present armament be sustained, it would be extremely difficult to replace, unless assisted from outside resources.

(d) *Food Supply.* The food resources of Yunnan are barely adequate to meet local needs. Rations for troops deployed in this region are supplied from other centres. This factor imposes a further burden on the already overloaded transport and inadequate lines of communication. The problem would be far greater should it become necessary to lengthen the supply line into North Vietnam, especially in view of the havoc already wreaked by bombardment against North Vietnam's communication links with China.

Summing up the Chinese ability to wage war in Vietnam, it is interesting to note that Mao Tse-tung consistently emphasizes that air and naval power, important as they are, will take second place to the land battle in deciding the issue in this theatre. If this is so — and he may well be correct — the immense size of China's army, despite its logistic weaknesses will be the major factor to be reckoned with.

Conclusion

An appreciation of the possibilities discussed points to the existence of a disturbing dilemma in the Chinese camp. If China ignores the plight of North Vietnam she faces the possibility of an immense loss of influence, which would encourage further stands by Western-aligned nations against Chinese instigated subversion and covert aggression, and would raise grave doubts as to her ability to remain an independent world power, despite her huge military force and newly acquired, though crude, nuclear capabilities.

Rather than accept this, the Chinese — as their only alternative — may have to take direct control of military action to repulse the southern threat. This tackling of the powerful United States and Allied forces lays them open to an even greater 'loss of face', and inevitable weakening of their internal as well as their external position should they fail in their objective.

However the ultimate prize of victory — the opening of the gateway to the subjugation of South-East Asia and possession of its economic potential — may finally tip the scales in favour of direct Chinese intervention. □

Correspondence in the field

Australian War Memorial Archives

44/06/93
HQ 11 Aust Fd Amb
26 Mar 44

Subject: W.E.T. Scales — Machetes, Entrenching Tools, Axes

HQ 7 Aust Inf Bde

1. Ref. Secret M.51.
2. Unit recommendations are as follows

	W.E.T. Present	Recommended
(a) Machetes 15-in blades (Aust)	36	40
(b) Shovels entrenching (Aust)*	20	20
(c) Axes, hand	8	12
(d) Axes, felling	12	12

* At present shown on WET as Implements, entrenching, 1399 Pattern. This instrument is not favoured by this unit.

J. Murray Blair, Lt-Col AAMC
CO 11 Aust Fd Amb

DCM 511
HQ 7 Aust Inf Bde (AIF)
30 Mar 44

Subject: W.E.T. Scales — Machetes, Entrenching Tools, Axes

11 Aust Fd Amb

1. Reference your 44/06/93 on 26 Mar. It is regretted that files held at this HQ do not go far enough back in history to include details of the "Implements, entrenching 1399 Pattern", of which 20 are held on the WET of your unit.

2. It is requested that a full description of this implement (with sketch) be supplied to this HQ for information.

3. It is noted that this instrument is not favoured by your unit. Please give reasons for this disfavour as it is understood from Military History Section that favourable reports on it were received from units equipped with it at the Battle of Agincourt (1415).

J.C. Mahoney, Maj,
BM 7 Aust Inf Bde

44/06/93
HQ 11 Aust Fd Amb
31 Mar 44

Subject: W.E.T. Scales — Machetes, Entrenching Tools, Axes

HQ Aust Inf Bde

1. Ref your DCM 511 of 30 Mar 44.

2. Attached as Appendix A is sketch with full description of "Implements entrenching 1399 Pattern" as requested.

3. The reasons this instrument is not favoured by this unit are:

(a) Although favourable reports were received following the Battle of Agincourt it is known that they emanated from observers stationed on the White Cliffs of Dover and the dug-out of Londinium.

(b) Henry V himself complained bitterly that if he had had efficient tools he would not have had to fill breaches with English dead. This practice was not only unhygienic but supplies of dead ran short owing to lack of shipping space caused by the First Fleet being in Sydney at the time.

(c) The Insignia, head horses, knights, makes obvious that this tool is only to be issued to officers. The officers themselves consider this unfair, and they insist that this insignia should be replaced by a Pawn so that OR's could also be issued with the instrument.

(d) The device "Armamenta non Butyrum" shows to what lengths the army will go to deprive troops of their vitamins. It is felt that it is quite all right to be born with a silver spoon in the mouth or to bite on a bullet, but to have to chew on an implement entrenching 1399 pattern is asking too much.

(e) Apart from the spike, gilt, eviscerating, the knife, Chirurgeon, caitiff cutting and on occasion the screw Archimedes etc., it is considered that this implement is unsuited to a medical unit. The prong earth disturbing and blade earth removing has been found to be inadequate when burying our mistakes.

(f) It was as the result of a lecture delivered at Ranelah by Marco Polo after his tour by cycle of Cathay that it was decided to press for the substitution of the above-named tools, which had had 50 years trial in Europe, for entrenching tools 'JAP' type.

4. Finally it is pointed out that this unit always attempts to keep abreast of the times, so much so that we are at present keeping a diary for 1945.

J. Murray Blair, Lt-Col AAMC
CO 11 Aust Fd Amb. □

THE NATIVE CARRIER

With all the aid given by scientific methods as found in the army organization, the whole campaign would have been bogged down in impotency but for the native carrier. He was the life line along which the eventual supply of everything to maintain the force depended. He was the only means by which casualties from the forward areas were handled with expedition. His faithfulness and stamina in the face of great physical disabilities are acknowledged completely. This powerful auxiliary could not have rendered such valuable service but for the organizing staff as provided by Angau. Though few in number their patience, courage and understanding of all native problems provided an outstanding example of leadership, organizing ability and devotion to duty.

— Report of 3 Aust Div in Salamaua area 22 Apr 43 to 25 Aug 43.

MacDOUGAL'S FARM, by Eric Lambert. (Frederick Muller Ltd., London, 1965, $2.30)

Reviewed by Hugh V. Clarke, a bombardier in the 8th Division, former prisoner of war, and author of The Tub (1963), Cowra Breakout (1965) and To Sydney by Stealth (1966).

MacDougal's Farm purports to be a factual story of a super-private of the 8th Division in action and in captivity and a record of his domination over inept and cowardly officers and over the Japanese.

The dust jacket blurb claims that the author was captured by the Japanese and imprisoned in Changi; that he was a former Victorian State fast bowler; and that he was a Rhodes Scholar. In the text the author implies that he served with a 9th Division battalion in the 1943-44 New Guinea campaign.

Since no evidence can be found to support any of the blurb's claims it is perhaps not surprising that the book itself is a shapeless conglomeration of inaccuracies, half-truths and alleged incidents depicting the stupidity, selfishness and callousness of Australian prisoners of war, particularly officers.*

Lambert's only personal association with Changi was *after* the war as a member of an Army Education team sent to Malaya with the Recovery Group.

In this account of Malcolm MacDougal's life as a prisoner of war in Changi, Lambert claims to have "stuck mainly to Malcolm's notes and his many verbal communications. I have drawn as well on some of my own recollections . . . to add colour and substance to the background."

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* *The reviewer's remarks about the dust jacket claims are supported by a search of the consolidated list of Rhodes Scholars to the end of 1958. To that date no Australian 'Lambert' had ever been awarded a Rhodes Scholarship. The Victorian Cricket Association has only one Lambert in its records. He was Harry Lambert, a fastish left-hander, who first represented Victoria in 1946. The VCA's letter, with appealing candour, adds that Harry Lambert 'is on holidays at the moment but his club Collingwood seems quite certain he was not a prisoner of war and cannot visualize him as an author.' For Eric Lambert to have been simultaneously a prisoner of war in Changi and a fighting soldier in New Guinea would of course have been an achievement nothing short of miraculous. — Editor*

To anyone who was in Changi, on the Thailand-Burma railway and in other camps on Singapore Island, Lambert's background and colour are sadly out of focus and his overall story too silly for serious comment were it not for the serious misstatements and malice it purveys.

Private MacDougal, according to Lambert, stepped off a troopship in Singapore in February 1942 and went up country with his unit. Becoming dissatisfied wth the manner in which his officers were conducting the fighting he established his own little unit of kindred souls (privates and NCOs) and went around looking for Japs. After some fighting MacDougal himself retreated in good order to Singapore to gather reinforcements. Forming his reinforcements into an orderly unit he again went back across the Causeway into the Malayan jungle, etc. etc.

Considering that a 70-foot gap had been blown in the Causeway on 31st January, after the last army units had crossed to Singapore Island, all of MacDougal's February activities would have constituted a considerable feat.

Describing life in Changi in November 1942 Lambert mentions that some of the prisoners already knew of the Sandakan Death March. How Lambert's characters gained such foreknowledge of an event which did not occur until 1945 he does not say.

Mr. Lambert states that the Australian divisional commander got out of Malaya on the last plane and left his men to it. The fact that Bennett accompanied by Moses and Walker escaped at great risk to themselves from Singapore in a native craft at 1 a.m. on the morning after the cease-fire has been public knowledge for many years. It apparently eluded Mr. Lambert. Furthermore this reviewer has yet to meet a fellow prisoner of war who did not approve the motives for General Bennett's action.

Apart from absurd misstatements such as the few random samples quoted above, the book is made up of second-hand attempts to describe the trivia of prisoner-of-war life (bugs, starvation, diet, brutal guards), already well recorded by authors such as Braddon, Whitecross, Rivett and others, and in the Australian Official History. His account of Private MacDougal's duck-farming venture suggests that this would have been a good theme for MacDougal himself to write about.

Apart from maligning officers throughout the book Lambert devotes a fair amount of scorn to the craftiness and cowardice of malingerers in Changi and their efforts to dodge being sent to the Burma-Thailand railway.

When "D" Force left Changi for Thailand in March 1943, no one in the group (which included the reviewer) was sure of his destination or the purpose of the journey. In fact there was keen competition among most prisoners of war to join any party which promised escape from the boredom and lack of scrounging opportunities in Changi. In most cases, however, the changes proved to be for the worse.

Few former 8th Division members would disagree with Lambert's criticism of the way the war in Malaya was fought, but all eventually became aware that the causes lay on a level well above that of the Australian commander of the two brigades of the 8th Division in Malaya.

There were some weak officers in the 8th Division, as there were in all other divisions before time and battle experience weeded them out. The tragedy of the 8th Division is that there was only one battle and no time.

Australian battle casualties of 1,789 killed in action and 1,306 wounded indicate, however, that the 8th Division made rather closer contact with the enemy than Mr. Lambert's story would suggest. □

CHINA AND THE BOMB, by Morton H. Halperin. (Thomas Nelson (Australia) Ltd, 1965, $5.10)

Reviewed by Lieutenant-Colonel J.O. Langtry, DCM, Assistant Military Secretary Army Headquarters.

COMMUNIST China detonated its first nuclear device on 16 October 1964. A nuclear capability in the hands of a regime hostile to the United States and the Western bloc, at odds with the Soviet Union, intent on regaining control of her traditional territories, including Taiwan and Tibet, establishing a Chinese hegemony in the Far East, and aspiring to first-class world military power status presents the rest of the world with the need for critical strategic reappraisal.

The author provides a useful and interesting analysis of the reasons for Chinese nuclear ambition, her probable capacity in this field both now and in the future, and the degree to which she depends on the Soviet Union. He also discusses the reactions of the United States to China as a nuclear power and suggests possible lines of approach for Western policy makers.

In a well-documented chapter, the author dispels the belief that the Communist Chinese take an unrealistic view of nuclear warfare and that they do not appreciate the great destruction it would cause — in China as in the rest of the world. The Peking regime is not irrational in its approach to nuclear

strategy and the determination of the credibility of a nuclear deterrent. The book argues this point of view logically and well.

Of particular interest to the military officer is the section dealing with China's nuclear potential. Bearing in mind that in the past there has been a tendency to over-estimate China's economic and military capability, it is important to appreciate just how limited is China's nuclear potential. The author claims that 'the development of any serious Chinese *inter-continental* nuclear capability is unlikely before the 1980's. Granting even this potential, it must be related to the ever-increasing capabilities of the United States and the Soviet Union. The author, I believe rightly, cannot foresee China gaining nuclear parity with the United States in the 20th Century.

Halperin quotes from a speech made by the United States Secretary of Defence, Robert S. McNamara in June 1962 which, in this context, is revealing and worth repeating. The speech was intended to state United States opposition to the spread of national nuclear capabilities, even among American allies. 'Relatively weak national nuclear forces with enemy cities as their targets are not likely to be sufficient to perform even the function of deterrence,' McNamara declared. 'If they are small, and perhaps vulnerable on the ground or in the air, or inaccurate, a major antagonist can take a variety of measures to counter them. Indeed if a major antagonist came to believe that there was a substantial likelihood of it being used independently, this force would be inviting a pre-emptive first strike against it. In the event of war, the use of such force against cities of a major nuclear power would be tantamount to suicide, whereas its employment against significant military targets would have a negligible effect on the outcome of the conflict. Meanwhile the creation of a single additional national nuclear force encourages a proliferation of nuclear powers with all of its attendant dangers. In short, then, limited nuclear capabilities, operating independently, are dangerous, expensive, prone to obsolescence, and lacking in credibility as a deterrent.'

The author's analysis of China's nuclear potential compared with those of the USSR and the USA puts China in the category of remaining a minor nuclear power for a very long time and therefore McNamara's remarks made in 1962 apply equally well to China today and in the foreseeable future.

So 'the real problem for American foreign policy will be how to maintain the Asian nations' morale and their willingness to oppose Chinese expansion . . . . Asian states will begin to ask

themselves whether the defence of Assam or of Burma or even Japan is worth the risk to the United States of unspecified millions of casualties. The United States will face the problem that she now faces in Europe — of convincing her allies that she is prepared to come to their defence despite the fact that the fighting *might* explode into a war involving attacks on American security'. It will be difficult to convince the Asian States that the current level of credibility of the nuclear deterrent will remain unaffected by China's acquisition of a nuclear capability and that China's leaders are sufficiently responsible and realistic about warfare to make it unlikely that China will embark on a nuclear adventure.

The author discusses foreign policy implications for the United States in Taiwan, India, Japan and Indo-China. He also signifies that there now exists an explosive element in Sino-Soviet relations. It seems unlikely that China's developing nuclear capability will improve relatons between the two countries.

Although the author takes pains to point out that China's nuclear capability and potential are very limited, he rightly concludes that 'in the long run, a China armed with nuclear weapons will significantly complicate the problems of American foreign policy in the Far East and throughout the World'.

China and the Bomb is a book well worth study and has the merits of being short and easy to read. □

THE THEORY AND PRACTICE OF WAR, Michael Howard (Editor). (Cassell and Co. Ltd., London, 1965, $4.80.)

THIS collection of essays, presented to Captain Liddell Hart on his seventieth birthday, makes no attempt at any definitive assessment of the contribution which Liddell Hart made either to military history and theory or to the events of his time. Yet inevitably when that assessment is attempted the volume will be regarded as a major source of reference.

The contributors were given as a theme the development of strategic and tactical theory in the West from its origins in the eighteenth century until today, and the interaction of this theory with the actual practice and preparation for war by soldiers and statesmen.

The fifteen contributors include six Englishmen, five Americans, one Scot, a Jew, a Frenchman and one Australian — Captain Robert O'Neill, whose contribution was published in full in the February issue of the *AAJ*. The absence of any contribution from Germany, where Liddell Hart's ideas

achieved 'such spectacular and sinister success' was a matter for editorial regret. Such a contribution — from 'one of the most distinguished of living German military historians' — was in fact planned, but when it was not forthcoming his place was taken by Captain O'Neill 'to whom the editor owes a major debt of gratitude, not only for the excellence of his essay but for the astonishing speed with which he produced it'.

The field of contributors, most of whom have been influenced in one way or another by the teachings of the Master, is a distinguished one: it includes two Ministers of State, eight university professors or lecturers, three regular or former regular soldiers (plus some others who resigned their commissions to enter other fields), one senior Government official and one practising journalist. Some have written or are writing volumes of either the British or American official histories; most are well-known writers on military affairs.

The contents are divided into three Parts. Part I concerns the pre-1914 era; Part II, pre-1939-45; Part III, except for one essay on 'The Development of Soviet Military Doctrine' which is traced from 1918, with developments from the end of World War II to the present day.

The essays are arranged more or less chronologically, so that the editor opens the innings with his 'Jomini and the Classical Tradition'. The choice of the initial essay would, one imagines, have been a hard one for an editor to make.

Professor Howard considers that the British Henry Humphrey Evans Lloyd opened a new age in the history of military thought with his *History of the Late War in Germany* (1766). There was about Lloyd's work 'a succinctness of expression and economy of style which gave him a far greater influence than his more verbose contemporaries and predecessors, and in reducing operations of war to an exact science Lloyd laid the foundations of the vocabulary of strategic analysis which is still in current use'. He discusses the works of Jomini and Clausewitz who followed, and considers it appropriate that the revival in military thinking after World War I should have begun in England with the writings of Fuller and Liddell Hart — in the country where, with the writings of Lloyd a century and a half earlier, it had originally begun.

Professor Jay Luvaas, in his examination of 'European Military Thought and Doctrine', remarks that strategical thought in England and the United States as a rule lacked originality and was not tied to any specific situation. Very little was written on the subject and the foremost texts were culled from earlier works and reflected the geometrical ap-

proach of Jomini. He mentions John Bigelow's *Principles of Strategy* (1894) as an important exception — 'at least he recognized what would happen when war was brought home to a hostile people' — but remarks that the only British work with any claim to originality was Colonel C.E. Calwell's *Small Wars:— Their Principles and Practice* (1896). This was of course in a field where the British soldier exceeded all others in experience. 'It speaks volumes for the vitality of British strategical thought during this period,' Luvaas acidly remarks, 'that among the two dozen and some titles listed in the War Office library in 1912 under "Colonial Warfare" this was the only book written by an Englishman!'

The French general, Beaufre, in his adulatory 'Liddell Hart and the French Army' attempts to show how Liddell Hart's influence might have saved France from the catastrophe of 1939-40. He says that Liddell Hart's 'sacriligeous' assessment of the World War I French generals in *Reputations* (1924) brought him into disfavour in the senior circles of the French Regular Army. When his later book, *The British Way in War*, was published the contrast between Liddell Hart's views and official doctrine in France, still based almost entirely upon the experiences of 1918, made 'a profound impression on my generation in the army and on our immediate predecessors. But these generations were then still part of the lower strata of the military hierarchy and lacked any real influence'.

At the higher level the prejudices in the French Army against Liddell Hart remained. The title of his book was construed to advance a strategy that while it might be appropriate to an island power was inapplicable on the continent with its fundamentally different problems. When support for Liddell Hart persisted General Gamelin in 1935 signed a circular 'reminding us that the High Command alone was qualified to define military doctrine and that officers should refrain on all occasions from advancing any personal views on the question. This unbelievable decision unfortunately met with total success, so strong was the discipline at the time. Military reviews, lectures and books became nothing more than paraphrases of the official doctrine. The Army's interest, which had been stirred for a brief time, was lulled again into conformism. The course of the Second World War was mapped out from that moment on. The Gods had ordained it . . .'

One wonders whether the buck should be passed entirely either to Gamelin or to French discipline in this way. Was Army conformism not part of the inertia that gripped France on a national scale at this time? Wavell, who attended the *Cycle*

D'Information des Generaux et des Colonels, after Liddell Hart's book had been published and before Gamelin's edict, considered that the French officers did not give the impression of being as practical or as active physically as their British opposite numbers and collectively they would have weighed 'many more hundredweights' than the same number of British senior officers. Excess weight sometimes induces sloth both of mind and body, though there was at least one notable World War II exception among Australian Divisional commanders. Wavell considered that the French officers, from the General Staff downwards, were satisfied that they had nothing to learn from foreign armies. 'During the three weeks we were living with the French Army, we were never asked a single question about the British Army, our methods or our equipment'.

In a review of this kind it would be hardly practicable to provide a sample of the wares of all the contributors. In Part III the essays of perhaps outstanding present-day interest derive from British contributors. In the first of these Malcolm Mackintosh examines the development of Soviet Doctrine since 1918. In another Alister Buchan, a son of the noted novelist and historian, discusses 'Problems of an Alliance Policy', using NATO as the central theme. Buchan considers that perhaps the single action that did most to destroy the original political basis of NATO and thus make all the problems of collective policy-making harder to solve, was the introduction of nuclear weapons into Europe. He concedes that it is hard to see how in the 1960s a satisfactory local balance of forces could have been maintained without some nuclear armed interdiction aircraft and missiles to offset an equivalent Soviet capability, but no one appears at the time to have realized that in so doing the 'entire operational control of the alliance was delivered into American hands', and that the effect was to make the reaction of an individual divisional or brigade commander of any nationality to any attack on his front 'dependent on a decision of the White House'.

There is a penetrating and forthright account of 'Training and Doctrine in the British Army since 1945' by Alan Gwynne Jones (the Lord Chalfont), Minister of State for Foreign Affairs in the present government, together with some brief but pertinent discussion of the unification of the Service Ministries into an enlarged Ministry of Defence. Henry A. Kissinger discusses 'American Strategic Policy and Diplomacy' (as usual with American writers today he seems to pose more questions than answers); and finally to round off the work there is an absorbing essay by Brigadier-General Yigal Allon on the making of the Israeli Army.

This is a stimulating and useful book, bringing light to bear not only on the past but the present, and at the same time acknowledging the contribution of Liddell Hart in a way that he no doubt would find most gratifying. There are one or two errors of a minor nature (for example, on p. 346 Allon is allowed to say that the Allies decided to invade Syria and the Lebanon in August 1941 when in fact the fighting at that stage was all over), and the biographical notes, seemingly dependent on information provided haphazardly by the contributors, sometimes lack consistency. Yet these are only the most minor of criticisms of a work that is generally well-arranged and absorbing. It deserves the widest audience.

— AJS.□

PHYSICAL FITNESS

Physical fitness, morale and a high standard of individual training on the part of the soldier are essential. Morale and weapon training need no special mention but physical fitness and hardening do. During training the soldier must be faced with real hardship and tough country so that when first going into battle he will not be utterly engrossed with his personal discomfort to the detriment of his real job. He must be trained to be resourceful and independent in looking after himself under the most primitive and arduous conditions.

— *Report of 3 Aust Div in Salamaua area, 22 Apr 43 to 25 Aug 43.*