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Photo: Australian War Memorial, Canberra.

SATELBURG

In September 1943, after preliminary operations along the north-western New Guinea coast, the Commander-in-Chief of the South-West Pacific Area, General of the Army Douglas MacArthur, launched an offensive to open the Vitiav Strait. 7 Australian Division air landed at Nadzab in the Markham Valley while 9 Australian made an amphibious landing in the Huon Gulf. Both divisions converged on and captured Lae. The Seventh then moved north-westward into the Ramu Valley while the Ninth moved around the coast to stage another amphibious assault against the Japanese at Finschhafen. In the latter operation bitter fighting centred around the Satelburg feature.

The picture shows troops of 9 Division moving in behind Matilda tanks for the final assault on Satelburg.

THE STUDY OF MILITARY HISTORY

Colonel E. G. Keogh, M.B.E., E.D.,
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HOW DO YOU STUDY military history? How often have I been asked that question, and how often have I found that all the enquirer wanted to learn was how to pass an examination? If that is all you want to do don't bother to read any further, for I am afraid that I don't know any short cuts, I don't know of any substitute for work. But if you want to enrich your mind with the military experience of the ages, if you want to broaden your professional knowledge and enhance your capacity to command, if you want to really understand the nature and climate of war, the following paragraphs may be of some interest to you.

There are, of course, plenty of people who can see no value in history — any sort of history. Well, one of the outstanding characteristics of most of the great men of our age is their awareness of the historical context in which they stand. Would Winston Churchill have reached the pinnacle on which he stands

without this awareness? Would Charles de Gaulle have been able to set France once more on the road to power and influence without it?

We cannot escape our past. Our whole culture — the way we think, the way we look at

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ourselves and others, our institutions, are the product of our national experience.

Military history is the story of the profession of arms, of the influence that profession has had on the general course of events, of the contribution it has made to our national life. We need to know something of the history of our army, of its exploits, for that history conditions our professional outlook. It explains why we find it best to do things in our own particular way, and it constitutes the basis of our form of discipline.

Military Experience

So far we have talked in general terms. Can military history do more for us than that? To begin with, let us forget the expression *military history* and think in terms of *military experience*.

Now the knowledge that every professional person has is not built up entirely from his own experience. Far from it. Law, particularly Common Law, is a code which has been built up from centuries of experience of many men. Medical knowledge is a compendium of the things that have been found out about human anatomy by all the doctors of all the ages. Doctors don't wait to find out everything from their own experiences. When a doctor, or a group of doctors, engaged in research make a discovery they usually publish the result. All other good doctors accept this finding and apply it to their patients.

In other words, the doctors are learning from the experience

of others. Should the soldier do less? As a rule a bad doctor kills only one patient at a time, but a bad soldier can get a great many men killed for nothing.

So let us think of military history as *the study of military experience*.

Actually, whether we know it or not we are continually using this experience. If we did not use it our ideas on many things would never advance.

For example, before and during World War I British doctrine held night attacks to be more or less impossible. It was held that control was too difficult and direction too hard to maintain. Few night attacks were undertaken by the British on the Western Front. After the war this doctrine was maintained.

Then when the war histories came out an officer named Liddell Hart noticed the frequency with which the early stages at least of the most successful attacks had taken place in fog. Liddell Hart pursued this idea, and found that nearly all the big and successful British and French attacks had taken place under foggy conditions. On the German side the phenomenon was even more striking. Of their six attempts to effect a major breakthrough in 1918, only three were successful and they were shrouded in fog.

Liddell Hart then asked, "If the most successful attacks were those which took place in fog, an accident of the weather which had not been planned for, would not night attacks be equally successful?"

The War Office nibbled at the idea cautiously and more attention began to be paid to night operations.

When Brigadier Pile (later General Sir Frederick Pile), who was at that time commanding the troops in the Canal Zone in Egypt, heard about Liddell Hart's findings he said, "If troops can attack in dense fog when they are *not* expecting it, they ought to be able to attack at night when they *are* expecting darkness." He then proceeded to prove that it was all a matter of thorough training, and night attacks became accepted.

This change in tactical doctrine resulted directly from the study of experience in World War I.

But the results did not stop there. If night operations became fairly general, there would be plenty of occasions on which one would want some light, perhaps temporarily. Perhaps one would want darkness up to a certain moment and then have the light switched on.

The tacticians stated their requirement and the engineers turned up with the answer — artificial moonlight.

So, from a study of the experiences of World War I there evolved two things — a new tactical concept and artificial moonlight.

That, I think, is a fair example of the practical application of military history. Of course, those are not the only things we can learn from World War I. The students picked out a few other useful tactical ideas,

and they learned a lot about administering very large armies in the field.

We need to look at the failures as well as the successes. We need to find out the real cause of all the useless butchery, the real cause of all the shockingly bad generalship that characterised most of the operations on the Western Front.

Why were most of the generals such poor, pedestrian soldiers? What had happened to the heirs of Wellington, Frederick, Napoleon? Was it their training or the lack of it? Was it the prevailing professional outlook? Was it because too much emphasis was placed on the wrong values? For example, was there too much emphasis on sport and social activities and not enough on serious work and study? Or was it because they had failed to learn from military experience?

It was probably a combination of all these things, but it is at least certain that they had failed to read correctly the lessons of the American Civil War and the South African War.

They were still seeking victory in terms of the Napoleonic concept as expounded by Clausewitz. This formula postulated the massive assault as the essential ingredient in the recipe for victory. But they failed to take into account the principal lessons of the American Civil War, namely:—

1. The breech-loading rifle and the spade, used in combina-

tion, had made the defence too strong to be overthrown by Napoleonic methods.

2. And since the American Civil War the machine gun had enormously increased the strength of the defence.
3. They ascribed the American failure to employ cavalry in shock action to amateur leadership instead of to the real causes — the breech-loading rifle and the carbine, and TRENCHES.

The result of this failure to learn from the experience of the employment of these new weapons and methods was the terrible battles on the Somme and in Flanders. The effects on Great Britain's manpower and national economy were enormous and far-reaching. It was on these stricken fields that Britain's decline as a front-rank world power began, though the full effects were not felt until later.

And all this because her officer corps had failed to read the lessons of recent war and to see therein the changes demanded by the introduction of new weapons. They did not have to speculate. The things experience had demonstrated had actually happened. Actual experience had demonstrated what would certainly happen in the future unless counter-measures were devised.

Let us take an Australian example of the misreading of experience. In the Palestine campaign of World War I the Australian Light Horse Regiments were mounted infantry armed with the rifle and

bayonet. They were not armed with the sword or lance. They were not trained or armed for the mounted charge. But at Beersheba one Brigade did undertake a most successful mounted charge. And at a couple of other places the British Yeomanry, who were armed with the sword, successfully charged the enemy.

After the war, on the strength of these isolated actions, we arrived at the conclusion that despite the fire power of modern weapons, trenches and barbed wire, the mounted charge was still a feasible proposition. The argument that led to this conclusion violated the rules of simple logic because:—

- (a) It failed to take into account the special conditions obtaining at the time of the successful charges.
- (b) It failed to take into account the negative side of the question — all those occasions when a mounted charge would certainly have failed, and even the occasions when charges actually did fail.

This superficial examination of the available evidence, plus unsound logic, led us to arm our Light Horse Regiments with the sword. They were still carrying the things right up to the outbreak of World War II. Worse still, they were thinking about trying to use them.

From these examples it follows that close study of experience in the sphere of weapons and devices — new weapons, new machines, new

means of transport, etc. — can help us very much in the development of tactical doctrine, organisation and administrative methods.

What about the art of war, of strategy, of tactical insight, of leadership. It is in these fields, perhaps, that we can extract the most value from military history. It is in these fields that we really do need experience, and it is just these fields that first hand experience is so hard to get in peace. We can get this experience only by the study of military history.

If we become involved in a great war the army is going to expand very rapidly. Promotion is going to be correspondingly rapid. Some of our officers are going to find themselves in positions of great responsibility in the field, or writing staff papers which may influence governmental decisions. We need not find ourselves in those positions entirely devoid of experience. By the constant study of military history we can acquire the experience which we shall need very badly.

I hope to show presently that the acquisition of this experience need not be all hard work, in fact a good deal of it can be a recreational pursuit.

How Do We Study Military History?

Now, how do we study military history? Two things are essential, namely:—

1. The wise choice of study material. I should like to leave that till later and go on to the second essential—

2. The development of a critical approach.

When you begin any piece of serious study, as distinct from the recreational reading which I shall mention presently, first think yourself into a highly critical frame of mind. Challenge everything; accept nothing without thinking about it.

For example, an Official History says something like this — “The Divisional Commander ordered — etc., etc.” Before you go any further think about that order. Think it out for yourself. Was it a sound plan? Did it take all the essentials of the situation into account? If you had been in his place, what plan would you have worked out?

Another example of challenge, of the refusal to accept statements at their face value, is to be found in the Australian offensives on Bougainville and in the Aitape-Wewak area. The necessity of these offensives was queried in Parliament, and one of the arguments put forward to justify them was:— “To commit any troops to a passive role of defence . . . is to destroy quickly their morale, create discontent, and decrease their resistance to sickness and disease.” From this are we to assume that troops committed to an arduous offensive under severe climatic conditions are bound to have a higher morale and to be healthier than troops engaged in defence? It is true, as a generalisation, that the offensive generates higher morale than the defensive. But is it true in particular cases? And do you have to mount a

full-scale offensive to maintain morale, or would a modified form of the offensive be sufficient? The formation on New Britain did not undertake a big offensive; it seems to have successfully maintained morale and the offensive spirit by aggressive patrolling.

Morale is an attitude of mind. In defence the correct attitude can be fostered by means short of full-scale attack. Take 9 Australian Division for example. Besieged in Tobruk, the division maintained morale and the offensive spirit by "giving away" the deep and commodious Italian dugouts in favour of fighting trenches, by deep patrolling, and by establishing their dominance over no-man's-land — "Our front line is the enemy's wire, no-man's-land belongs to us."

After being shut up in the fortress for months on inadequate rations, the troops might have been a bit on the lean side, but they were still full of fight. And their health was surprisingly good — until, on relief, they got in amongst the flesh-pots of Egypt.

Beware of generalisations. Ask yourself, always, is this statement true of this particular situation, of these particular conditions? Unless you cultivate the habit of asking yourself these questions you will degenerate into a mere mechanic, and a bad one at that.

In the beginning this takes up a fair amount of time. But as you gain in experience you will find that you do it almost sub-consciously. One side of your

mind is taking in the written facts, the other side is working on the problems. And that is just the sort of mind that successful commanders have and that all officers need.

Don't forget to apply the same critical approach to the administrative side of war.

Learn to read between the lines, particularly the lines of the official histories. Official historians expect their professional readers to be able to read between the lines. For example in speaking of Singapore, the War Office history says, "Many stragglers were collected in the town and sent back to their units."

What does this statement suggest?

In an advance stragglers are to be expected. Men become detached from their units for quite legitimate reasons. We provide for them by establishing stragglers' posts to collect them and direct them back towards their units.

But when we get large numbers of stragglers behind a defensive position, and a long way back at that, it suggests that units have been broken up or that there has been a breakdown of discipline somewhere. And that in turn suggests that the general situation had reached the stage when a lot of people had lost confidence, when morale was at least beginning to break down.

Once you have started to develop this critical, challenging approach you will be on your way to acquiring the habit of

sorting out fact from fiction. Our history is full of great military myths, most of which we thoughtlessly accept at their face value.

Take, for example, the story of Dunkirk. This episode has so captured public imagination that authors are still making money writing about it. It has come to be generally regarded as a glorious page in our military history. And so it is so far as courage, fortitude and discipline are concerned. But is this picture good enough for the professional soldier? Ought he not to see Dunkirk as a military operation stripped of all the glory? Looked at with the cold eye of the critical student, Dunkirk is seen to be what it actually was — a shocking military defeat which came within a hair's breadth of bringing Britain to her knees.

At the time Dunkirk was represented to be a glorious feat. This was fair enough because in it the British people found the spiritual strength to carry on the war. To that extent the soldier was justified in supporting the myth. But privately he needs to have a good hard look at the generalship — on both sides of course — which brought about this terrible disaster to British arms.

Each year in Australia we celebrate Anzac Day. How many of us look beyond the bands and the flags, and analyse the operations? If you want to ascertain how *not* to mount an amphibious operation, or any operation at all for that matter, you will find all you want to

know in the real story of Gallipoli.

Sometimes these myths grow after the event. Sometimes they are deliberately created at the time and ever afterwards are accepted as truth, too often even by soldiers.

Take for instance the myth of the "Spanish Ulcer". Wellington's campaign in Spain was imposing a tremendous strain on the British people. The Government explained that the campaign was imposing a still greater strain on Napoleon, that the "Spanish Ulcer" was "bleeding him white".

In actual fact the campaign was having far more damaging effects on Britain than it was on France. It is extremely doubtful if Britain could have continued the war much longer for the long-suffering public had very nearly had enough when Napoleon abdicated and retired temporarily to Elba.

We are often advised that the best way to study military history is to test the decisions, plans and actions by applying to them the principles of war. In my opinion this is a bad line of approach for the following reasons:—

- (a) It restricts the scope of our inquiries from the very beginning.
- (b) It channels our thoughts along pre-determined lines, which is the thing to be avoided at all costs.
- (c) In the world today there are several lists of principles, lists which differ from each other in sub-

stance and in emphasis. Which one do we take? Our own has been changed at least twice in my lifetime.

Suppose we reverse the process. Suppose we set out to test the validity of our list in the light of experience. I think that would be slightly better because it will at least half open our minds to some original thinking. However, the object of our study is not to test the validity of this or that principle, it is to cultivate our minds, to fill them with the wisdom of experience. I suggest that the best way to do this is to set out to discover some principles, some *constantly recurring patterns* for ourselves.

We know that throughout nature similar causes always produce similar effects. If we can discover in the military sphere some recurring chains of cause and effect, some constantly recurring patterns, we will have learned much from experience. We will also be struck by the frequency with which the rules or principles established by these recurring patterns are violated. And we will be struck by the fallacious arguments put forward in support of each violation.

One of the clearest patterns that emerges from military history is the one which demonstrates the evils of failure to concentrate upon the attainment of the aim. Time after time, war after war, large forces are sent on missions which cannot possibly further the attainment of the aim. At the worst they jeopardise, or even prevent, the attainment of

the aim because they weaken the main effort. At the best they are a wanton waste of human life. This pattern seems to apply at all levels of activity. In the field of strategy there is the example of the Mesopotamian Campaign in World War I. Closer to home we have our own Solomons and Aitape-Wewak campaigns in the later stages of World War II. The real war against Japan had moved 1,000 miles to the north. The Japanese forces left behind in these areas were isolated and helpless. They could do absolutely nothing. Why on earth did we engage in costly offensive operations to clean them up when they could have been safely left to wither on the vine? We could have collected the lot with scarcely a battle casualty when the main Allied forces brought about the collapse of the Japanese main forces.

My own reading over the last few years leads me to believe that we ought to have another principle of war in our list — the Principle of Command. It seems clear enough that the organisation and maintenance at all times of a proper system of command is vital. By system of command I mean not only the commander, but the means, staff, signals, etc., to enable him to exercise command. At any rate the evidence demonstrates that neglect or failure to organise a proper system of command has frequently been the primary cause of failure at all levels. We are all familiar with the arguments about the organisation of the high com-

mand. It is astonishing how often we come across failures to adhere to this principle further down the scale. In World War II in the Middle East alone there were at least four major failures of this kind. The chaos which prevailed in the later stages of the withdrawal from Greece, and probably the loss of several thousand men, was directly caused by the failure of GHQ to establish a proper command in the Peloponnese. And they had available the means of doing it. In all probability the real cause of the loss of Crete was the failure to provide the commander with the means of exercising command. Here again the means were readily available. A corps headquarters was actually on the island. It was taken off and sent to Palestine where it remained unemployed while Crete was being lost for want of some good staff work. It remained unemployed while the first phase of the Syrian operations degenerated into a fiasco caused by a patently imperfect organisation of command. After the battle of Gazala the whole structure of command in the Eighth Army was broken up, and remained broken up until Montgomery came along and promptly put it together again.

Throughout history we find time and time again a commander winning through the exploitation of the "Line of Least Expectation". That is to say, he found and used a line of approach which the defender had neglected to guard because he thought it to be an impossible one. We could produce a

long list of examples of this. What would we learn from such a list? I think it suggests that we ought always to make sure that the impossible is in fact impossible — and then keep an eye on it.

Methods of Study

Methods of studying military history will vary to some extent with each individual, but I suggest that in all cases there are two essential requirements for success.

1. A critical, challenging approach.
2. A mind alert to discern recurring patterns, recurring chains of cause and effect.

Although method will vary with the individual, I think the following preliminary steps are necessary whatever method we pursue.

1. Be quite clear about the political aim of the war.
2. Be quite clear about the national strategy by means of which the political aim is to be secured.
3. Be quite clear about the aim of the campaign you are about to study:—
 - (a) How does it fit into the national strategy for the winning of the war as a whole?
 - (b) How does it contribute to the overall aim?
4. Study the features of the theatre of operations, particularly:—
 - (a) The terrain.
 - (b) The weather.
 - (c) The people (friendly, hostile, or neutral).

- (d) The communications.
- (e) Resources, including food-stuffs, skilled and unskilled labour, etc.
- (f) Climate for effects on health.

These four points constitute a firm base for our study of the campaign.

Now the actual method of study. Each individual must find the method that suits him best. One method I would suggest is to set about it as though you were preparing a series of lectures on the campaign. Actually write the lectures, remembering that each lecture has a time limit. This limit forces you to concentrate on essentials, to discard the irrelevant detail. When you have written a series of lectures which give an intelligible account of the campaign, and a running commentary, you will have learned a lot about it.

Now all this sounds like hard work and so it is. Unfortunately there is no substitute for work. However, there is another very important side of military history — the study of the human factor in war — which need not be so frightening.

The basic material which the soldier uses in his profession is human nature — men and women. He must know how people react to the stresses of war, and how they react to danger and adversity, to triumph and disaster.

Where Do We Find The Material?

Where do we find the material for the study of the human fac-

tor in war, of the actions, emotions and thoughts of ordinary men and women and of the art of leadership? Fortunately this part of our study need not be hard work. It can indeed be a recreation. Nearly everyone reads for recreation. Why not systematise this recreation and turn it to good account by reading for pleasure books with a direct or indirect bearing on the subject?

What sort of books should we read to give us an insight into the human factor? Well, we can read the heavy tomes with the psychological slant but we can hardly call them recreational. I think we will get on far better, we will acquire a deeper and more lasting knowledge of human beings at war if, with our minds always alert to pick out the lessons, we read:—

- (a) Biographies.
- (b) Appropriate novels.

It is unnecessary to labour the value of biographies, but it is desirable to add a word of caution. The author is sometimes apt to be carried away by his admiration of the person he is writing about, to make out he was always right, to make him into too much of a paragon of all the virtues. And the autobiographies, the books written by the actors themselves, very often suffer from the same defect. They seldom admit they were wrong and, writing from hind-sight, they are usually able to prove that they were right. So read these books with a critical eye. Don't let yourself be carried away by the author's plausibility or eloquence. With

this proviso these books are a very valuable source of information, and are generally quite easy to read.

Historical and War Novels

Now the novels. Don't despise the novelist, but make a distinction between the author who writes merely to spin a good yarn and the author, the serious novelist, who writes because he has something to say, some important comments to make. It is probably true to say that the novelist and the dramatist have done more to directly influence the development of thought and ideas than all the philosophers. While it is true that the philosophers and the thinkers produce the basic idea, it is the novelist and the dramatist who "put it across" by translating it into terms which ordinary folk can understand and appreciate, into terms of universally experienced human emotions — love and hate, courage and cowardice, hope and despair. Consider, for instance, the tremendous influence of the novel "Uncle Tom's Cabin". Up to the time of its publication there was a chance that the issues which divided the Northern and Southern States of America could have been settled by wise statesmanship and public forbearance. Its publication made the civil war virtually inevitable. It focussed all the issues upon a single point — slavery. It enraged the South and it inflamed the North. In far away Europe, particularly in England and France, it created a public opinion which compelled the Governments to drastically

modify their policies of active sympathy towards the Southern cause.

World War I produced a crop of novels which profoundly influenced the course of events over the two following decades. With few exceptions all these books expressed the violent revulsion of the common man against the stupidity and futility of the dreadful blood-baths to which they had been subjected on the Western Front. You can learn all about the strategy and the tactics of the Western Front in half a dozen printed pages, for there was precious little of either to write about. But if you really want to understand, if you want to find out what the war was like from the point of view of the fighting man, read novels like "All Quiet on the Western Front", "Not So Quiet", "Her Privates We", "War by ex-Private X", "Covenant With Death", etc. Read the poetry of Siegfried Sassoon and Wilfred Owen, and plays like "Journey's End". Above all, read C. E. Montague's "Disenchantment". Every officer ought to have this little volume of beautifully-written essays. He ought to keep it by his bedside and read a few pages every night. That will keep his feet on the ground and his head out of the clouds.

From these books you will learn more about the real nature of World War I than from all the learned volumes of strategy and tactics put together. You will learn about the incredible imbecility of the worst vintage generals in all history, of the shocking staff

work, of the sheer ineptitude of military leadership all the way down the chain of command. You will understand why the people who make and unmake governments in democratic countries cried out in revulsion "To hell with brass hats and red tabs, to hell with generals, we shall have no more of that nonsense". And when you have understood that you will understand the motive force behind the policies of disarmament and appeasement which led step by step to World War II.

In Service circles it is fashionable to blame the politicians for this disastrous disarmament policy. Anyone who has given thoughtful attention to the literature of World War I would know that this view fails to trace the chain of cause and effect back to its origin. The politicians were simply reflecting public opinion. That public opinion had been created by the war itself. It had been expressed, focussed and consolidated by the literature of the war. Some of the writers, C. E. Montague for instance, went right to the heart of the matter — the downright ineptitude of the military leadership and the reasons for it — others saw only the result. If the soldiers had conducted their business more efficiently, as they did in World War II, the literature would have had quite a different tone. In the ultimate analysis of cause and effect the soldiers were responsible for the wave of pacifism which swept the democratic world after the war, not the writers or the politicians. They only expressed the

public opinion which the soldier had created.

The novels of World War II reflect a totally different feeling because the field leadership at any rate was infinitely better. The value of these books lies in the presentation of the cold facts in a way which enables us to grasp the "feel" of the thing in a very vivid manner. For example, we may read that the Allies sent to Russia by the Arctic route so many tanks, aeroplanes, trucks, so many millions of tons of shell, that so many ships were sunk, so many lives lost. All good stuff for a planner to know, but it leaves you stone cold, it raises no feeling at all. But if you read "HMS Ulysses" you will have a very good idea of what the cold statistics meant to the Allies in terms of human values — in terms of human courage, resolution and suffering. And if you read David Forrest's "The Last Blue Sea" you will learn more about the impact of the jungle on young troops than all the text books can give you. If in the pursuit of your profession in peace or war you forget those human values, all the rest of your knowledge will go for naught. Those values are your indispensable tools of trade.

The Documentary

There is another, though rarer, type of book which presents both the technical and the human aspects of war in an easily digested form. I don't know the literary term for this kind of work. It resembles a documentary film which presents the dry facts of some par-

ticular aspects of life, or some particular persons or events, by clothing them with human values, reactions and emotions without passing into the realm of true fiction. The characters, instead of being creatures of the writer's imagination, are real people, people who have actually lived and whose actions have influenced the course of history. Instead of simply giving us the bare, and often unimpressive facts, the writer brings them back to life, re-creates the scenes and the scenes and the actions he wants to present to us. Treated in this way by a skilful writer, the facts we are seeking become more vividly impressive, more easily remembered and more easily read.

This form of literary expression has been brought to near perfection by a school of American writers. In the sphere of military history perhaps the leading exponent is Bruce Catton, whose magnificent works on the American Civil War vividly depict its strategy and tactics, the personalities, and the varying degrees of abilities of its leaders, the reactions of the troops to the ebb and flow of victory and defeat. All the great lessons are there, timeless as time itself — the results of half measures, of indecisiveness, of bad staff work, the influence of selfishness and personal ambition, the little things that go wrong and cause great disasters, the over-riding importance of the human factor with all its strength and frailty. These things always have been and probably always will be, the

factors which determine the issue of victory or defeat.

In his book "A Stillness at Appomattox", Catton gives us an almost exact representation of one of the major problems of the atomic battlefield — the exploitation of the hole punched in the enemy's defences by a nuclear explosion. The Union army faced the Confederates in strongly fortified lines at Petersburg. When several assaults had failed a Union engineer suggested driving a tunnel under a vital point in the confederate works and blowing it up. That part of the programme was an immense success — what was probably the biggest explosion in any war up to that time blew a huge gap in the Confederate lines. The rest was a pitiable fiasco. Through the neglect of elementary principles, through the failure to do simple things which could reasonably be expected of a junior subaltern, experienced generals failed completely to exploit the opportunity. It is remarkable how monotonously disasters occur through the failure to do simple, elementary things. History may not repeat itself, but, by Heavens, the mistakes of history do. Are some of us going to make the same mistakes on an atomic battlefield?

Recently an Australian author, Raymond Paul, made a very creditable attempt to give us in this documentary form the story of the early stages of the war on our own northern approaches. His "Retreat From Kokoda" is, I think, the first military classic this country has

produced. Despite certain attempts to discredit this book, it is chock full of lessons which are of the utmost importance to the Australian Army. More recently an Englishman has given us the story of the destruction of the Normandie Dock at St. Nazaire in "The Greatest Raid of All." While this book lacks something of the power and sweep of the other works referred to, it could almost be regarded as a text book on the organisation and conduct of an amphibious raid.

Some years ago, during a wet spell on a holiday, I picked up a book with the unpromising title "Prepare Them for Caesar". Up till then Julius Caesar had been for me a shadowy, academic figure. In the book he came alive, a very human figure. Reading it I found what Wavell tells us to seek. I began to understand why men followed Caesar, why his soldiers stuck to him when his cause seemed hopelessly lost.

To the great merit of these books — the novels and the documentaries — lies in the fact that they do not require hard study, they are truly recreational. Nevertheless every one you read adds a little more to your knowledge of war. Subconsciously your trained mind will be at work criticising, evaluating, picking out the lessons great and small, lessons which are more likely to stick because they are expressed by living, human characters instead of cold, inanimate print in a text book. Subconsciously the climate of war, the vision of

men and women in action from the cabinet room to the forward area, seeps into your soul and becomes a part of your being. A sympathetic understanding of human nature will be created in your mind, an appreciation of its grandeur and its frailty, its varying motives, its hopes and ambitions and fears, its cruelty and its compassion. It is not sufficient for the soldier to be aware academically of the various facets of human nature. He must have a far deeper awareness than that. The best way to acquire that essential awareness is to read the works of good writers whose talent enables them to present human beings in a way which touches our hearts as well as our minds.

Conclusion

The officer who studies military history along the lines of recreational reading and analytical research will benefit in three ways:—

Firstly, he will develop a mind rich in the experience of war in all its aspects. The climate of war will become an integral part of his subconscious being. Without consciously thinking about it he will have a cultivated awareness of the pitfalls which strew the path of the commander and the staff officer, and he will be able to see the possibilities and the dangers of any situation or any course of action.

Secondly, he will develop the power of analysis — the power of breaking up the problem into its component parts, balancing one against the other, and arriving at a sound solution.

Thirdly, it will fill his mind with knowledge of human beings in combat, and that is essential knowledge for the soldier.

I have recommended two types of literature. Each type complements the other. The official histories give you the bare facts, the skeleton. The

biographies, novels and the documentaries clothe the bare bones with the flesh of human beings in action.

Finally, remember that unless your critical analysis of fact is not tempered with sympathy and compassion you will never learn anything about humanity.

In an article to be published in an early issue of the Australian Army Journal, Major H. L. Bell, Pacific Islands Regiment, employs historical research to test the validity of some of our training doctrines and methods. His article is a fine demonstration of the practical application of military history.

— Editor.

OFFICER TRAINING IN THE U.S. ARMY

Major D. K. Lyon,
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ALONG WITH a history of military competence through eight wars and nearly two hundred years, the United States Army has an enviable record of significant contribution to the nation. The Army was instrumental in exploring and developing the mid-Western and Western areas of the United States and has given to the country two Presidents, many leading engineers, jurists, planters, diplomats, educators and political leaders. Much of the success of the nation can be attributed to Army officers. What is the educational system that has produced such remarkable men, schooled for a professional military career, who contribute to the civilian community such a wealth of talent?

The US Army has two categories of officers: the Regular Army Officer, who is a professional officer of the permanent forces; and the non-Regular Army Officer. The latter, including Reserve Officers and National Guard Officers, are not a part of the permanent forces but may serve with the standing Army throughout a full career or may provide short term service during emergencies. Non-Regular Army officers may join

the Regular Army by competing on active duty to have their commissions made permanent if they have completed at least two years of university work and are otherwise qualified.

In examining the education of the professional United States Army Officer it is necessary to look at both the education he receives before commissioning and the education received after becoming an officer. Schooling may vary prior to commissioning, depending upon the source of entry. After commissioning officers are considered for in-service education without regard to source of entry.

Education Before Commissioning

Commissioning may be obtained in four ways. First, a candidate for a commission who has completed only a high school course may enter the Army as a private and apply for Officer Candidate School (OCS). This school offers primarily tactical subjects and leadership

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training to prepare the student for small unit assignment in his branch. Upon successful completion of this less-than-a-year's course, the candidate will be commissioned in the Army Reserve. This same route to commissioning is open to individuals who have attended civilian university but who did not participate in military training at the university.

Second, the candidate who has completed university and who, in addition to earning a bachelor degree, completed the Reserve Officer Training Corps (ROTC) programme may be commissioned upon graduation in the Army Reserve. He may be offered a commission in the Regular Army if his performance in ROTC was outstanding. The ROTC programme provides the majority of officers for the US Army. The ROTC programme is a military training programme sponsored and staffed by the Army at various universities. The ROTC programme teaches basic military subjects during the academic year and holds a summer camp for tactical training of the cadets.

A third way of obtaining a commission is by direct appointment from civilian life. This method is reserved for a very small number of specialists whose qualifications are commensurate with the requirements of the military speciality for which they are commissioned, such as doctors or nurses. These persons will have completed the education appropriate to their speciality.

They also will be commissioned in the Army Reserve.

The final method of obtaining a commission is by attendance at one of the service academies, such as the United States Military Academy, West Point, founded in 1802 and the U.S.'s oldest engineering school, is a four year, government financed, university level, national military academy. Appointment is by nomination by a federal Congressman or by competitive examination. The West Point system includes: a trying first year which aims to weed out the unmotivated and incompetent; a comprehensive programme of physical fitness; a programme to develop high morals and a sense of duty through an all-encompassing honour system; and an education in the arts and sciences designed to produce an educated individual of value as a career officer. Only a few hours a week are devoted to military subjects except during the summer when two months of military training are fitted between academic years. The academic programme is 40% social sciences and humanities and 60% mathematics, science and engineering taught in small ten to fifteen man classes instructed by an Army officer and requiring daily recitation either orally or in writing in each subject. After graduation about 75% of the West Pointers decide in favour of Army careers and over a period of 162 years these officers have set high standards for the Army.

Every officer of the U.S. Army, then, regardless of source of

commission and in addition to basic military training, must have completed a recognised high school course. Every Regular Army officer is required to have at least two years university education prior to commissioning. Non-Regular Army officers are not required to do university work in order to receive a commission, but all officers are encouraged to complete a degree either before or after commissioning. As a result, over 75% of the US Army Officers do hold at least a bachelor's degree.

Education After Commissioning

Far from being the end of schooling, commissioning is the beginning of a career that will include much additional education as well as military training.

Immediately after commissioning all officers (except OCS graduates) will attend their branch of service school for a Basic Officers' Course. In this four to eight months' course they will be taught in classroom and field those military skills, tactics and administration needed to serve adequately in any lieutenant's capacity. Subjects range from the psychology of leadership to communications.

After three years of service most officers become eligible to resign their commissions except in time of emergency. Those who remain in the service will, after four to six years of duty, return to their branch schools for an Advanced Course (also called a Career Course). This six to nine months' stint will qualify them to fill those staff

or command jobs which a captain or major might expect to hold. This course teaches combined arms tactics and company/battalion level administration. Normally, all officers attend this school.

After serving ten to twelve years the US Army officer is considered for schooling at the US Army Command and General Staff College, the senior tactical school. Only about 50% of the officers will be selected for attendance. This school teaches higher level staff and command techniques so that with additional experience the graduate will be qualified for higher command and staff appointments normally held by lieutenant colonels and above. This is a one year course, although a short version can be done in about half the time.

There are several more military schools for which only a few officers are selected. The Army War College, a one year course in Army command and highest level staff techniques; the Armed Forces Staff College, a tri-service strategic level school in joint and combined operations; the Industrial College of the Armed Forces and the National War College where all three services and representatives of the several federal departments study such things as the economics of national mobilisation, civil defence and military-political inter-relationships in war. Not all officers attend these schools and few attend all of them. These courses are considered final stepping-stones to the highest level of staff and command.

Finally, besides normal military schooling, an officer may do additional civilian schooling. Those officers who do not at the time of commissioning have a degree may continue to work for one with some government financial assistance. Those who do have a degree may be selected for graduate schooling at government expense to attain masters' or doctoral degrees. This could easily account for another couple of years in the officer's career. About 15% of US Army officers hold an advanced degree.

Thus, even after attending a university, West Point or an OCS course and having been commissioned, the career

officer can still expect to spend at least another three years or so in formal military education. This amounts to over 10% of the officer's active duty career, and it does not include those short courses for specialist training such as parachute school, intelligence, public relations or special weapons employment courses.

Conclusion

The United States Army is a vast undertaking requiring skilled and competent leaders. In attempting to ensure a continuing group of qualified leaders, the Army emphasises education in peacetime to prepare for war.

COMPETITION FOR AUTHORS

The Board of Review has awarded first places and prizes of £5 for the best original articles published in the September and October issues as follows:—

September: "The Parting" by Warrant Officer P. G. Gittins, Royal Australian Army Education Corps.

October: "Army Film Production" by Major A. W. Millen, Royal Australian Infantry.

BATTLEFIELD SURVEILLANCE AND RECONNAISSANCE

Major D. J. Mannett, M.C.,
Royal Australian Infantry

SUCCESSFUL operations are based on the effective applications of one's own forces against those of the enemy, in a given territorial environment. Knowledge of friendly order of battle is a matter of basic military efficiency and organisation. Information about the enemy and the territorial environment in the theatre or area of operation must be acquired. It must be obtained quickly and be at the optimum standards of accuracy and completeness so that the commander's employment of his forces can be both economical and effective.

The aim of this article is to explain the nature of, and the part played by, surveillance and reconnaissance in the provision of information about the enemy and the area of operations.

The Information Collection Problem

The area within which a commander is concerned with the collection of information is his

"area of interest". This is defined as "that area of concern to the commander, including his area of influence (extent of the range of his supporting weapons), areas adjacent thereto and extending into enemy territory to the objectives of current or planned operations. The area also includes areas occupied by enemy forces which could jeopardise the accomplishment of the mission". Dependent on the type of war being fought (Nuclear, Limited or Anti-insurgency), the weapons with which the forces are equipped, the nature of the terrain, the size of the area of interest and difficulty of obtaining information will vary. Regardless of these variations, the area of interest is likely to be at least twenty-five thousand yards deep and fifteen thousand yards wide.

The sources of information which are tapped to provide the desired data include higher headquarters, interrogation teams, agents and others in one group. The remaining

sources are found among the combat troops and their supporting arms. It is this latter group of sources with which this article is most concerned.

The effort involved in collecting the necessary information in an area of at least seventy-five thousand acres has two purposes. First to update information already held, and second to obtain fresh information. To maintain this effort, and keep the information at the required level of accuracy and completeness, requires the employment of a large proportion of a commander's resources and takes time: both of these at the expense of the operation. It follows that a system must be devised which can obtain information in time to be of use in planning, while being economical in the use of resources.

The Collection System

The system which has evolved employs both men and technical equipment in an integrated programme of battlefield surveillance and reconnaissance. An explanation of these components is now offered, to clarify their relationship to one another and remove some of the "black box" impression which in some quarters is attached to the term battlefield surveillance.

Battlefield Surveillance

There is nothing in the definition of battlefield surveillance to support the view that this is a "black box" system. It is "the continuous (weather, day and night) systematic watch over the battle area to provide timely infor-

mation for tactical ground operations". The key words are "continuous" and "systematic".

All possible sources of information including ground troops, aerial photographs and various equipments (radar, infra red, etc.) may be deployed in this continuous system of general surveillance. It will be supplemented by reconnaissance of specific targets, which may be detected by surveillance or other sources of information.

Reconnaissance

In addition to the requirement for the more general, continuous and systematic aspects of battlefield surveillance, there exists a need for the specific aspects of reconnaissance. No explanation of this term is necessary. Suffice to say that it involves a specific mission.

An analogy which can be drawn to illustrate the nature of the two elements of the system is, that the nightwatchman indulges in surveillance whereas the burglar does a reconnaissance. On the battlefield the two components are complementary.

Man v. Devices

Man, with his basic senses of sight, hearing, speech and smell is the original and still basic source of information in the battle area, but he suffers from the following limitations:—

- (a) His vision is seriously restricted at night and in poor weather conditions.
- (b) He is vulnerable to enemy detection and action.

- (c) Fatigue limits his employment continuously over long periods unless reliefs are provided. These are often impracticable.
- (d) Supply of the man creates a problem, particularly when security must be maintained.
- (e) Speed of movement is such that, unless equipped with a secure radio link, information cannot always be obtained in time to be of best use.

Notwithstanding these limitations, man's value in patrolling, observation posts and visual reconnaissance (air) are undeniable.

To offset the limitations listed above, technical aids are gradually being introduced to assist in both surveillance and reconnaissance. Such devices fall into two categories. The first is the group of aids to assist the man overcome his limitations (e.g. infra red night vision). The second category consists of devices, which to a large degree replace man in certain fields, e.g., counting devices replacing some deep patrols, and the more familiar aerial camera which replaces the greater part of aerial reconnaissance other than by commanders.

The combination of man and devices, and the exact nature of the surveillance/reconnaissance plan will depend entirely on the situation. It should again be emphasised that any suitable source of information can be employed in either surveillance or reconnaissance. The only criterion that can be applied is

that the source employed should be the one best suited to the task.

Devices

Technical aids which can gain, or assist in gaining, information fall into a number of categories. Some are listed below:—

Aids to Human Vision

- (a) Active infra red sources employing viewing equipment, such as night driving glasses, binoculars and weapon sights.
- (b) Passive infra red viewing and firing sights.
- (c) Flares of the parachute and trip varieties.
- (d) Artificial moonlight.

Aids to Human Hearing

- (a) Electronic listening devices.
- (b) Sonic counting devices.

Photographic Equipment

- (a) Ordinary photographs using high speed films.
- (b) Photography coupled with radar and infra-red.

Detection Equipment

- (a) Radar.
- (b) Infra-red (including camouflage equipment).
- (c) Radio direction finding.
- (d) Electromagnetic detection.

Vehicles

- (a) Aircraft of the fixed and rotary wing types.
- (b) Drones equipped with a selection of the devices mentioned above or below.

Miscellaneous Items

- (a) Radio intercept.
- (b) Counting devices.
- (c) Television.

Because of their nature, these devices also have one or more of these limitations:—

- (a) Mechanical/electronic failure.
- (b) Vulnerability to enemy counter measures.
- (c) Transmission of the information obtained to the place of origin of the device or equipment.
- (d) Weight.

The limitations of equipments often dictate their gradual introduction, and their use in combination with other devices and man. It should be remembered here that radar has been used by the counter bombardment organisation for some time so the idea of devices is by no means revolutionary.

Collection Method

The information collection system employs surveillance and reconnaissance sources (man and device) in one or more of the following ways:—

- (a) Ground to Ground.
- (b) Ground to Air
in fixed wing, rotary wing or drone type aircraft.
- (c) Air to Ground)

Assuming that the collection plan adopted provides for the adequate coverage of the area by general surveillance and specific reconnaissance, the amount and accuracy of the information obtained will be satisfactory and it will be closely related to the operation. However, in addition, the requirements for co-ordination, speed and security must be met.

Co-ordination — Speed — Security

The requirements of co-ordination, speed and security can be met by:—

- (a) The detailed planning and implementation of the collection effort. This ensures that the most economic and effective use is made of each available source of information.
- (b) Efficient collation systems. The ultimate would be a form of Automatic Data Processing. Current systems of filing and ORBAT cards are slow. These will possibly be replaced by a manual punched card or similar system as an interim step to the automatic data storage/retrieval system.
- (c) Regular and objective dissemination of information and intelligence obtained from all sources of information.
- (d) Improved methods of processing information held on photographs (air or ground) and the improved production of overlays or overprints well forward on the operational area.
- (e) Reliable, comprehensive and secure communications. These include digital and "spurt" transmission systems.

The only part of the process of producing intelligence from information that has not been mentioned in this quest for speed is the aspect of "interpretation". One may expect that future collation systems des-

cribed in sub-paragraph (b) above will include interpretation programmes which will provide a partial solution. Nevertheless, I believe that, as war is an art rather than a science, man will continue to play the most important role in this stage of the process and the machines will be employed to provide up-to-date data quickly.

Conclusion

Battlefield surveillance and reconnaissance are complementary systems, employing combinations of men and equipments to collect information on which to base planning. Surveillance is continuous and general whereas reconnaissance is done as required and is specific.

Mechanical and electronic devices are gradually being introduced to improve the efficacy of the systems. They facilitate the collection of information under all conditions, and the rapid and secure transmission of it to the headquarters responsible for collation.

By understanding the nature of these systems, and their sources of information, one can best understand their capabilities and limitations. This ensures the most effective employment of resources to achieve the greatest benefits. In addition, such understanding will help to dispel the air of mystery which seems to be attributed to the term battlefield surveillance and to some of the equipments likely to be employed.

It is inevitable that frequent changes should take place in the region of action. A policy is pursued up to a certain point; it becomes evident at last that it can be carried no further. New facts arise which clearly render it obsolete; new difficulties, which make it impracticable. A new and possibly the opposite solution presents itself with overwhelming force. To abandon the old policy is often necessary to adopt the new.

— *Sir Winston Churchill.*

ARE AIR MOBILE FORCES VULNERABLE ?

Colonel Fred L. Walker, Jr.,
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Reprinted from the October 1964 issue of **MILITARY REVIEW**,
U.S. Army Command and General Staff College,
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ONE of the primary factors which has slowed the development of air-mobility concepts for some years is the possibility that aircraft are too vulnerable to hostile fire to survive in the forward combat areas. A great deal of comment has been propagated and published on this subject.

The prospect, however, of employing air-mobile tactical forces offers a possibility of significant advances in the development of combat tactics — advances whereby the West might exploit its technological advantage partially to offset the numerical advantage which the Soviets enjoy in armoured and other conventional land forces.

What, exactly, is meant by the term "aircraft vulnerability"? Does it mean vulnerability to destruction by weapon fire? Unless the term can be more specifically defined, it is of no apparent significance — all military elements can be readily destroyed by hostile fire if exposed to it. Men, vehicles,

and equipment are useful in the battle area, not because they are "invulnerable" to enemy fire, but because attempts are made to avoid exposure to that enemy fire.

Everyone knows that troops mounted in trucks cannot drive through an organised enemy position without being slaughtered. A column of armoured vehicles would fare little better. Troops in helicopters would be no more successful, especially in this day of highly effective anti-aircraft weapons. But this certainly does not justify drawing a conclusion that motorisation and mechanisation of combat

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units is impracticable, or that air-mobile combat units cannot operate successfully in battle.

The Question

The real question to be answered in evaluating the survivability of aircraft in air-mobile units is: If an air-mobile unit and a comparable motorised unit had the same typical combat mission to perform, would the air-mobile unit and its aircraft be more or less vulnerable to hostile destruction than the corresponding motorised unit with its wheeled and tracked vehicles?

On this basis, of course, the vertical, air-transported envelopment of a hostile defensive position is eliminated from consideration, since this is not a typical combat mission which the motorised unit can perform and because it allows no comparison to be made between the two units. This is just as well. A variety of other combat missions are more typical of today's mobile operational concepts. The vertical airborne envelopment of static, fortified lines is a special assault technique probably more applicable to World War II than to the present and possibly too costly to attempt in any case, except in an emergency situation.

Classic Method

A typical combat mission more in keeping with the general nature of mobile operational concepts would be a flanking manoeuvre during a meeting engagement. This has been the classic method used by mobile tactical forces to exploit

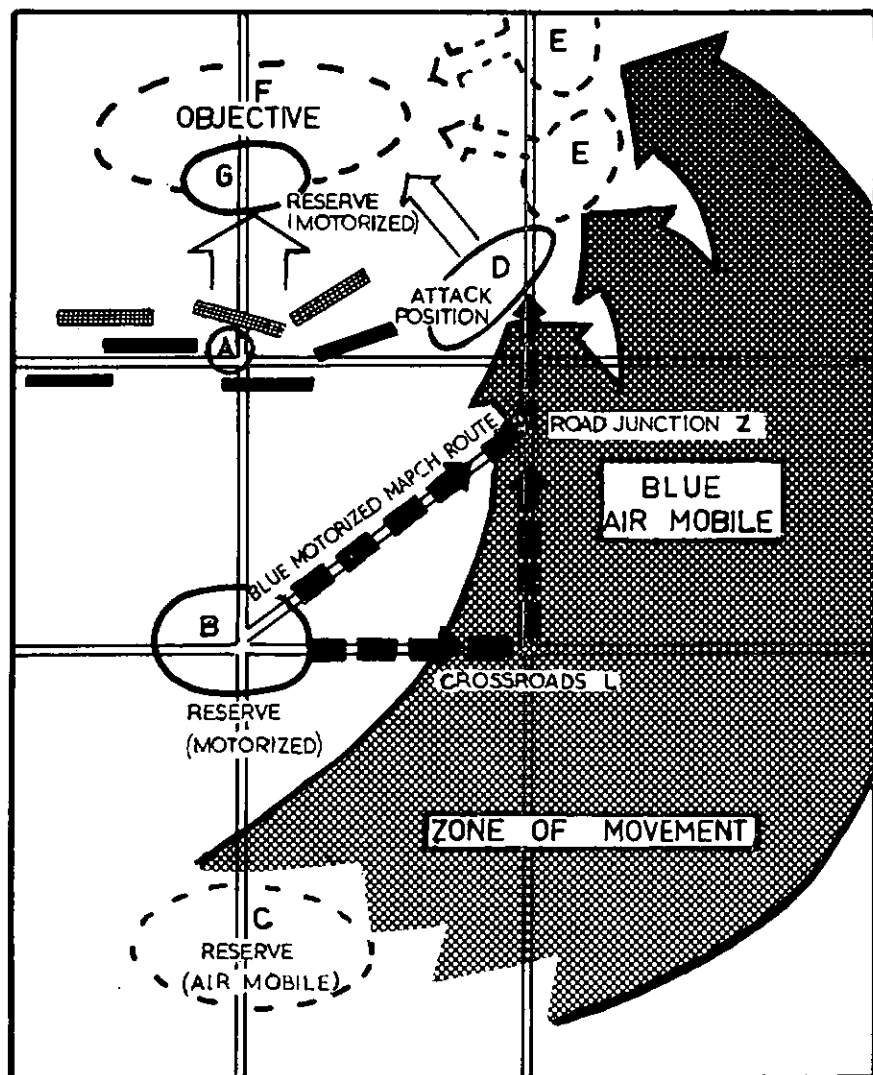
success. In various forms, it continues to be the normal method of exploiting mobility today. Here, if anywhere, air-mobile forces should be able to demonstrate their advantages.

Consider, then, the situation schematically represented in the illustration. Blue troop elements moving north are engaged in combat with Red elements at point A. Blue reserve units have just arrived at point B, and the Blue force commander has decided to launch a co-ordinated attack to seize objective F, committing his reserve force to an envelopment of Red's left flank.

In this situation, let us compare the results to be expected of a motorised force as opposed to an air-mobile force, with particular emphasis on vulnerability to hostile action. Although the motorised force includes armoured elements, we will refer to it as Blue motorised for simplicity, while the air-mobile force will be referred to as Blue Air Mobile.

First, consider the case of Blue Motorised. With caution and rare luck, Blue Motorised may avoid detection by hostile air and ground reconnaissance elements until its leading elements have moved some distance down the road from point B. Red knows at a glance, however, that Blue has only two possible routes to follow — the highway direct to road junction Z, and then north, or the more circuitous route via the cross-roads at L.

Visual surveillance by Red of these routes can be readily



SCHEMATIC ILLUSTRATION FLANK MANOEUVRE.

established using an occasional aircraft flight, one or two long-range ground patrols, or observation posts manned by guerillas. In darkness, a few pieces of portable radar or infra-red surveillance equip-

ment on the ground or in the air can continue to see everything that passes along the roads. The Blue movement is not only highly vulnerable to detection, but the detailed dispositions of his road columns

also can be monitored and reported in up-to-the-minute detail.

Harassing Tactics

Red aircraft and artillery can impede Blue Motorised by interdicting a restricted road net within a relatively confined area and by taking Area D under fire when Blue arrives there and deploys for combat. Even if limited only to general indications of Blue's movement, Red can inflict punishing losses and delays with unobserved harassing fires by artillery and missiles, as well as by attacks on targets of opportunity conducted by armed reconnaissance aircraft. If, in addition, Red has mounted the skilful reconnaissance and surveillance operations which are well within his capabilities, then Red can also use observed artillery and missile fires and tightly co-ordinated air attack with drastic effect.

The restricted road net available to Blue favours Red's use of delaying and harassing tactics which he can conduct effectively by using only small detachments of infantry and armoured troops. Roadblocks and ambushes can be positioned along the route with the virtual certainty that Blue's leading security elements must move head on into each successive trap. Prepositioned combat patrols or guerilla parties may be used by Red to harass Blue's columns in depth.

Blue's road columns, whether armoured or not, can hardly avoid casualties from both direct and indirect fires, as well

as from mines. Red stands a good chance of inflicting decisive casualties and disorganisation on Blue before the latter can arrive in position and launch his flanking attack.

The combination of Red's harassing and delaying operations may reasonably be expected to facilitate his early decision for the redeployment of reserves to meet the threat. Red's problem of decision is further simplified by the relatively small area in the vicinity of D from which Blue can be expected to launch a flanking attack if he chooses to envelop this flank. All in all, Red may be reasonably assured of timely warning for the successful organisation of co-ordinated blocking or counter-offensive action by his reserve.

Critical Point

From Blue's viewpoint, the most critical point in the operation will occur during the final deployment and reorganisation for combat in attack positions at D. Delays will occur in moving off roads for cross-country deployment in attack formations; bunching of vehicles and personnel in de-trucking and assembly areas will be unavoidable to some degree; and danger from Red's preplaced mines and harassing artillery fires will be at a maximum.

Once Blue's attack against Red's organised defensive positions is under way, Blue assault troops and their vehicles can expect to be engaged by Red's direct and indirect fires in greater volume and with increasing accuracy. Blue tanks,

armoured self-propelled weapons, and armoured troop carriers can continue to accompany leading assault elements only if they avoid exposure to Red's direct fire anti-tank weapons.

Blue's unarmoured weapons carriers and other tactical vehicles with the assault elements hold themselves somewhat farther to the rear during intensive phases of the fire fight in order to minimise exposure to indirect as well as direct enemy fires. During reorganisation on objectives, forward displacement, or other lulls in the action, they can quickly rejoin forward elements to perform resupply, evacuation, and transport functions.

By these standard and proved methods, Blue's tracked and wheeled vehicles may accomplish their missions within acceptable losses. Blue Motorised may reach the objective, provided it can successfully run the gauntlet of all the successive menaces.

Increased Vulnerability

In the past, motorised operations of this type have met with success as often as not. Today, their vulnerability to enemy action is greatly increased as a result of improved reconnaissance and surveillance equipment, the extended range and lethality of artillery and missiles, and advances in mines and mine warfare capabilities. How would the same factors operate if given the same situation, the Blue enveloping force were air mobile?

To begin with, Blue Air Mobile, because of its greater range and speed of movement, could and undoubtedly would occupy initial positions in reserve considerably farther to the rear and more widely dispersed than in the case of Blue Motorised. Because of this and the far greater speed with which it can move, Blue Air Mobile has good prospects of avoiding detection by hostile air-ground reconnaissance until its leading elements are visually contacted by hostile screening elements on Red's flank. Red cannot possibly know which of the unlimited routes of air movement Blue may follow.

Detection Difficult

The magnitude of the reconnaissance and surveillance effort which Red has to mount to assure timely warning is multiplied several times, while the time available to establish a security screen is sharply reduced. Moreover, Blue's air-mobile columns, instead of being relatively canalised on one or two roads, can follow a number of different routes, circuitous as well as direct, with march elements widely dispersed in depth along each route. The blue movement would not only be difficult to detect in its entirety, but, even when detected, could not be accurately assessed as to strength, purpose, and march objectives until the bulk of the movement was completed.

Red efforts to inderdict and impede Blue Air Mobile by long-range artillery fires and air attack would face a far more

difficult task. Blue's choice of multiple routes and march objectives and his high speed of movement would make it virtually impossible for Red to employ pre-planned, unobserved interdiction fires with any appreciable effect. Moreover, Red's ability to mount effective surveillance measures to cover all possible avenues of air mobile approach is far more limited than it was in the case of Blue Motorised. Therefore, Red's ability to employ observed artillery fires and ground-directed airstrikes against Blue's air-mobile march elements would be severely restricted.

Red could employ armed reconnaissance aircraft to overfly his flank approaches and to attack targets of opportunity, and the idea has been expressed frequently that air-mobile operations are particularly vulnerable to this form of attack. However, this point is open to question. First, Blue Air will be protecting the columns. In addition — as compared to the obvious, slow-moving, road-bound targets offered by Blue Motorised — the widely scattered, hundred-mile-an-hour aircraft of Blue Air Mobile, scooting along with evasive action at treetop level, would offer elusive targets. They would be more difficult to find than truck columns, and, once found, would be more difficult for high-performance tactical aircraft to attack by fire.

Less to Fear

On all counts, Blue Air Mobile would have less to fear from Red's artillery and aircraft than

a Blue Motorised force in the same situation.

The broad zones of movement available to Blue would minimise Red's ability to conduct delaying and harassing tactics. His roadblocks and mines would be of little use against Blue's air-mobile troop movements. And, while Blue Motorised was limited to launching its attack from the vicinity of D, Blue Air Mobile, by virtue of its greater speed and mobility, could attack as readily from the alternative area at E. Obviously, Red's problem in planning the employment of his reserves and deciding when and where to commit them would be far greater; the ability of his reserves effectively to block and combat Blue Air Mobile's enveloping attack would be far less.

The most critical point in the operation for Blue Air Mobile would still occur during the final deployment and reorganisation for combat in attack positions. But effective hostile interference would be less than in the case of Blue Motorised. Aircraft-mounted march elements, not being canalised by roads and obstacles, could move directly to landing and dismount points adjacent to attack positions.

Avoid Delay

Aircraft could rapidly discharge troops of each march element within a few minutes, withdrawing immediately to covered and remote aircraft assembly areas. The delay and vulnerable concentrations of vehicles and troops character-

istic of de-trucking operations would be avoided. The vulnerability of Blue Air Mobile during this phase would be far less than that of Blue Motorised.

Once Blue has launched his attack from D, or E, he must still expect to encounter well-organised resistance at some point in his advance to the objective. During the attack, just as with Blue Motorised, vehicles can continue to accompany the leading assault elements only by avoiding exposure to Red's fires.

Unlike the armoured vehicles which could closely accompany Blue Motorised dismounted assault elements, Blue Air Mobile's aircraft would be vulnerable to indirect as well as direct fires, and would have to avoid exposure to both. Instead of remaining near the dismounted assault elements, they would have to occupy defiladed dispersed areas some distance to the rear. Because of their greater speed and mobility, however, they could rapidly re-join the dismounted assault elements on call to support them by fire missions or to transport assault troops in rapid forward manoeuvres.

During such brief actions in the forward area, they would be covered by supporting infantry and artillery fires, and, although a lack of armour would deny the protection against small arms fire and shrapnel which armoured carriers would have, this loss would be offset by greater speed and decreased exposure time. Moreover, air-mobile assault units could exploit carefully selected

routes of attack over areas of limited road nets and impassable terrain.

The same procedures would also assure rapid, up-to-the-minute supply and evacuation support of forward assault elements throughout the operation, and would have the advantage of minimising Red's ability to harass or delay the movement of Blue's supply columns.

Tactical Advantages

On balance, considering a step-by-step comparison of Blue Motorised and Blue Air Mobile operating in the same typical combat situation with the same combat mission against the same opposition, it is clear that in this hypothetical instance Blue Air Mobile enjoys substantial tactical advantages and sharply reduced vulnerability of both personnel and vehicles throughout almost all phases of the action.

Blue Air Mobile's forces are patently less susceptible to detection by Red's reconnaissance and surveillance and less vulnerable to Red's artillery, delaying actions, and mine warfare measures; they have less to fear from blocking actions by Red's reserves; and they achieve greater surprise, launch their attack at more favourable times and places, and push their attack through to the objective faster and with reduced exposure to Red's organised ground defensive fires. The size of the operating forces is of no significance to the foregoing analysis. The same principles, procedures, and comparative factors would be in-

volved for a company task force as for a brigade.

The analysis could also be extended to a variety of combat situations since the same combat tasks and phases of operation occur and are repeated in varying order and degree in all. A penetration of lines, for example, could be thought of as a double outward envelopment.

On first glance, the analysis might not appear adaptable to position warfare involving continuous fortified lines. Admittedly, an air-mobile unit could not slug it out in such a situation without considerable reinforcement. It would be rare, indeed, to encounter a defensive line unbroken by mountains, rivers, lakes, swamps, or impenetrable wilderness areas which, far from obstructing air-mobile troops, would provide them with natural and ideal routes of penetration and attack.

Nuclear Aspects

The fearful spectre of the nuclear battlefield is always present and must be considered. Here, indeed, if we consider the situation in the illustration, it becomes grimly apparent that Blue Motorised could hardly

carry through the operation without suffering major losses, and possibly annihilation. Only the great dispersion, speed, and surprise achieved by Blue Air Mobile could afford a chance of evading and outmanoeuvring Red's nuclear strikes and closing successfully with Red's reserves and rear area troops.

If air-mobile operations are thought of as a new and exotic shortcut to victory, divorced from previous tactical principles and procedures, and oriented toward the vertical penetration of enemy-occupied positions, they can only appear ominously impracticable.

If, on the other hand, air-mobile forces are recognised in terms of combat units which operate and are organised in accordance with the same sound and proved principles as before, while at the same time exploiting the speed and increased mobility of low-flying aerial vehicles in place of surface-bound vehicles, a more practical and optimistic view emerges. Not only do air-mobile units, with their vehicles, often become less vulnerable to enemy action, they also attain other tactical advantages of possibly sweeping significance.

PHILOSOPHY, PSYCHOLOGY AND THE ARMY

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AN OFFICER or NCO of enquiring mind will speculate on the basic qualities of the human material in his care. He may expect to be guided by science — naturally, as our age is the creation of the scientific method. Disappointment awaits. Psychologists mainly concern themselves with the individual: can measure intelligence, discover aptitudes, and estimate the likelihood of breakdown under stress. They have only begun to analyse group conduct. Strangely, they ignore the army — one of the oldest and most complex of organisational efforts, and easily available for study.

Thus, man-management in the Australian army, as in all armies, remains a pre-scientific mystique; an art, a vast store of know-how, expressed in customary ways and attitudes, amassed through the ages from the experiences of every army that ever marched.

Much has been lost by lack of record. We know, roughly, what Hannibal said to his motley

force, before his great victory at Cannae; we are ignorant of the techniques of the Carthaginian officer corps, which made possible his incredible successes. Caesar himself tells with what words he nerved his troops to cross the Rhine. Of the millions who served in Rome's armies, not one has left a diary, describing day-by-day military life. And so, the secret of the six hundred year supremacy of the legions died with them.

Ancient failure to report need not surprise, for until lately man has not looked objectively at his own doings. What demands explanation is the fact that the spirit of this age — the insatiable urge to examine and dissect — recoils from the army. Why should Australian intellectuals lack interest in an institution on which their very life may soon depend? Their aversion has doubtless affected community thinking; active hostility is rare, indifference common. Amongst civilian soldiers, those of leadership calibre are more likely to sense community

disinterest and to contact intellectual disapproval. Herein lie the seeds of disaster; for a country's war potential depends on a confident and dedicated cadre of leaders.

A key to the problem can be found in certain concepts of human nature, which shape the politics — and the scientific thinking — of the modern world.

Eighteenth century philosophers, living in an age of extravagant privilege and inhuman exploitation, powerfully restated the ancient dream of a golden age. Beneath the dross of civilisation, they discerned "natural man" — peaceful, inclined to own goods in common, and to live without rank. Somewhere, history had gone wrong, had suppressed and perverted man's true character. Rousseau proclaimed, "Man was born free, is everywhere in chains." Later, Marx took over the ideal of "from each according to his ability, to each according to his needs." With social justice, the state would wither away, wars would end. These revelations erupted into energies which shook the world; but their working-out ended in cosmic contradictions. French revolutionary armies, crusading for liberty, equality, fraternity, enslaved Europe. The Communist revolt against privilege and war has fathered today's most hierarchy-ridden and aggressive states, flowers in Mao-tse-Tung's ultimate cynicism — "truth springs from the barrel of the gun."

In fact, the alibi has failed. Once again, man faces what he

cannot admit—that his troubles are due, not to aristocracy, or capitalist conspiracy, or armament cartels, but to his own restive nature.

Nevertheless, the "noble savage" still shadows our thinking, and may weaken the resolve of an army leader. He could feel that his task is unnatural and immoral; that he has to pervert a peaceful being into ways of violence, make a true democrat accept inequalities of rank.

The purpose of this article is to look critically at "natural man"; and to list more modern, perhaps more valid theories of group behaviour.

Firstly, how does the peaceful Adam stand against long horizons? An ancestor of man has been found, almost certainly. A four-foot tall running ape, he roamed the plains of Kenya, one million years ago. His teeth were as inoffensive as ours: yet his small remains are found amongst vast bone-piles of his prey. Beyond doubt, this slight creature was the most formidable predator of those savage times. With him are the secrets of his success — simple weapons of stone and bone. Another faculty he surely had — the art of combining to use them. And he seems to have not been reluctant to kill and eat his own kind. Man was an instinctive maker and user of weapons, even before he was man. When he settled in villages, he stocked them with weapons. The more civilised he became, the more effectively he made war. Ultimate verdicts on his affairs have always been

made on the battle-field. Sadly, the philosopher's pacific Communist never was.

What of the natural democrat? Observation of primates in their natural state — in fact of many mammals — finds addiction to rank. Disputes between male animals, thought by Freudians to be sex-fights are, in fact, struggles for status. Sociologists have long noted that in communities without formal rank, unofficial differences appear, based on membership of secret societies, wealth, sporting prowess, and so on. It is hard not to suspect that rank lies deep in the human make-up, with its two aspects striving for personal status, and conforming to it in others.

Finally, what of national boundaries — frequent causes of war? Naturalists — and increasingly, students of man — find useful the concept of "territoriality". They note that most birds and mammals, and particularly our primate cousins, tend to define territories for family or tribe, battling fiercely against those of their own kind who cross the lines. Strangely, an animal loses confidence and fighting ability when he trespasses on another area — which may explain why nations going to war invariably think of their action as defensive.

Summing up: man inherits from the ages an inclination to make and use weapons; to unite for hunt or battle; to structure his combinations with rank; to define and defend territory. The army instructor has to teach weapon-skill; team work in

exercising it; and the resolute, ingenious and complete carrying out of orders. His job is already half done — the polite bank-clerk strips down, not to a peaceful individualist, but to a soldier born. The fact may be regretted, but remains a fact. A military leader shares with all men the desire for a utopia of peace. His job in hand is to ensure that his nation survives to enjoy it.

Worth mention is a strange by-product of the noble savage myth — the carrot and stick theory of motivation. Nineteenth century economists conceived that industry had to convert an amiable loafer into a worker. Two inducements only were thought to apply — threat of punishment, promise of reward. The fallacy exploded in industrial upheavals. "Efficiency experts" still lean towards this sterile creed. It may enter the thinking of the army officer who resorts routinely to loss of temper.

The Basic Group

Humans identify with groups ranging from friendships between two to nations of millions. In fact, a personality can be thought of as a condensation in the matter of society — a kind of overlap of the groups to which the owner belongs. Of all such arrangements, large or small, permanent or fleeting, one has dominating importance — the primary, basic or face-to-face group. This is society's unit of action, the doer of the world's work, wherein the individual finds fulfilment, or unhappiness. Here, then, is the

background of abnormal, or neurotic behaviour, and a logical start-point for social and psychological enquiry. Efficiency of a military unit can be thought of as the sum of the effectiveness of its component primary groups, its morale as the common factor of the spirit of these groups. Thus, the concept offers a systematic and rational approach to the problems of command, and merits detailed consideration.

To precisely define the primary group is difficult. There are innumerable examples — the school class, the work-shop, the road-gang, the football team, the family, the infantry platoon. Some are for life, others last a few weeks; some may be voluntary or compulsory. Some have vital function, others a trivial purpose; membership features common to these diverse collections are:

1. Recognition.
2. Predictability.
3. Common purpose.
4. Personality interaction between members.

Let us focus down on the essential requirements.

1. *Recognition* consists of shared attitudes, applies both to members of the group and to outsiders in contact with it. Recognition expresses in various ways — titles, rank structure, badges, uniforms, ceremonial drill. Symbols and rituals of unity satisfy deep emotional needs, can be used deliberately to build esprit-de-corps.

2. *Predictability* is the practical effect of shared attitudes.

Members of a group know how fellow members will act in a variety of situations; and outsiders expect certain behaviour of them. When a soldier, or a platoon, is called "dependable", "predictable" is largely what is meant. Conditions of predictability are, the effective teaching of the relevant attitudes, and the willingness and ability of the individual to conform to them.

Here, we come close to the central process of human society — the allotting and learning of roles. A role is a pattern of response to a complex of related situations; woven into the pattern are particular purposes. Every man has many roles — for example, husband, father, son, banker's clerk, member of a bowling club, and so on. It will now be apparent that when we study groups and roles we look at two sides of a coin — at equivalent structure and function. To what a man belongs, and what he does, reduce to the same thing.

Education consists largely of learning roles. Army training has to define roles very precisely, and teach them very thoroughly, for the stakes are high.

3. *Common purpose*. Purpose can usually be subdivided almost to infinity. The main purpose may be so wide as to define the relationship of the group with the rest of humanity. Intermediate targets could alternately be termed methods. Purposes and methods may be written in detail, or may be implicit. The formal purpose

need not be the main, or real purpose. A philosophic objective can have decisive military value. Conversion to Islam triggered the explosive seventh century conquests of the Arabs. Communist movements make indoctrination part of their military structure; daily ideological sessions possess the soldier with the demonology and world objectives of Communism. Like the old Moslem mullah, the commissar aims to create fanatics; although the heaven he promises is rather different.

The commissar system must be the key to understanding the peculiar strength — and probably the weaknesses — of our possible Asiatic enemies.

To us, military evangelism is not congenial. Nevertheless, communication of purpose remains essential. At all levels the good leader puts his subordinates in the picture — both of the daily pattern, and as much as can be, of the long perspective. Especially vital is the informing role of the leader of the primary group; from him the soldier gets his sense of direction.

4. *Personality Interaction.* Something must take place between group members before they become a team. Two processes effervesce side by side: each member getting to know other members; and each member, guided by the knowing, making adjustments to his own attitudes. The phenomena are emotional, not intellectual, and instinctual rather than deliberate. On them most depends the effectiveness of the basic group.

Main conditions of the interaction are size and time.

(a) *Size.* The desirable size of a primary group rests partly on the technical demands of the purpose, limits being set by the fundamentals of human nature. Under military conditions, the range seems between five or six and something over a hundred—roughly, from a 1939 section to company. Ancient Egypt won the world's first empire with an army structured in hundreds. The basic unit of the Roman army paraded about eighty men. The irresistible Mongols formed their battle-line in tens, and multiples of ten.

Armaments change, men do not; Army reorganisation must consider, not only weapons and the tactics derived from them, but the rules by which men work together.

(b) *Time.* New units are allowed a "settling in" period. Just-commissioned warships go on "shake-down" cruises. On analysis, the purpose of the marking time is to allow basic groups to take form, to gel. The human chemistry is hottest, most turbulent, when it begins; behaviour disturbances and disciplinary problems reach their peak. Leaders — and medical officers — need to grasp the reality of the "hot" phase in the evolution of their unit, otherwise good material may be labelled insubordinate, or

neurotic, because of what amounts to a stumble on strange ground. An intelligent NCO can often avoid a head-on situation without loss of authority, and shepherd his man over the hump. The conscientious RMO does not stop at the diagnosis of malingering; he looks for reasons and solutions, both in the army and civilian situation. In fact, his duty extends to assessment of personality and military potential.

There is surely room for systematic thought on the pace of training programmes. When too much is asked too soon, loss and damages reports mount, and sick parades swell with acute neuroses of a type rarely seen in private medical practice — panic attacks, frank hysterias, excessive concern with minor injuries. An RMO should be as alert for a rise in functional complaints as for an increase in gastro-enteritis cases; his CO could find warning of the first epidemic at least as valuable as of the second.

When the basic groups have stabilised into smooth working, morale crystallises. Then, the unit has found itself, can take almost any strain — including, up to a point, decimation by battle and disease. As to this point, and related questions, historical study could probably give answers. How much can a primary group be diminished, and still function?

How quickly can it absorb replacements?

Three more facts of group psychology need attention.

5. *The Natural Leader.* The primary group readily accepts its appointed commander. However, an informal spokesman tends to emerge. He reflects the current tone of the group, and may be replaced as the situation changes — in the same way, perhaps, as nations seem always to dismiss their war leaders when peace comes, and vice versa. An immature officer can think he is a rival. Actually, the appointed and "natural" leaders function in different areas. The perceptive officer becomes more effective by understanding and using the phenomenon.

6. *Contact.* Good leaders forge a bond of feeling with their men. The ability to make contact defies formulation. It is separate from technical competence; and certainly, is the essence of man-management. Industrial research finds that remote control, even if superbly planned, performs badly. Great generals have, one and all, excelled in generating vital warmth — an achievement quite compatible with rigorous discipline. At primary group level, the junior leader who fails in contact fails in everything.

The art can be cultivated. Commercial and industrial experience recommends the seminar programme. About twelve executives meet regularly, under a non-committal chairman, for free discussion of

day-to-day problems. From the to-and-fro emerges, at least for some, better insight. Improved self-knowledge relieves the need to be infallible, lessens pre-occupation with internal tensions, releases energy for relationships. Perhaps the method could be adapted to army leader-training.

7. *The Bad Apple*. A discordant personality cripples normal group development. The misfit may be a solitary, or of rigid disposition; his value may emerge when he is transferred to a suitable niche. Or, he may be a true inadequate, and should, with all kindness, be returned to civilian life. Some seriously disturbed men slip through any system of recruit examination; the screening process, and the assessment of aptitudes must continue after enlistment. To recognise the inadequate is not usually hard; consistently poor performances and frequenting of sick parades are the give-aways. Some of these unfortunates develop engaging personalities, as part of their defence. Moreover, they seem to attract more than a fair share of bad luck. Sympathy may tempt a leader to waste effort on hopeless material. The RMO stands in the best position for detecting such futile situations; he will be put on the scent when a particular face haunts his RAP.

Concluding, I do not imply that equations can be applied to human behaviour. There are myriad qualifications to any explanation of conduct — especially to a widely applicable theory like that of the primary

group. However, the concept offers a logical approach to problems of discipline and morale. Complex technique has imposed on the army a bewildering variety of organisation. A unit commander considering the human material scattered through his forest of equipment can begin by asking himself what is, or what promises to be, the basic group; by following the ancient rules, he can set about turning a crowd of technicians into a fighting force.

Some statements in this article could seem brashly unorthodox. They may be evaluated in the main source-books:

1. "Prehistory and the Beginnings of Civilisation" — Hawkes and Wooley.
2. "African Genesis" — Richard Ardrey.
3. "The Social Psychology of Industry" — Browne.
4. "Human Groups" — W. T. H. Sprott.
5. "The March of the Ten Thousand" — Xenophon.

This work merits comment. A band of Greek mercenaries was left stranded in the heart of Asia by the defeat of their hirer, a pretender to the throne of Persia. They fought their way to the sea, traversing a thousand miles of mountain and desert, through numerous and warlike tribes. One of their generals, an Athenian, tells the tale; it demonstrates the miracles inherent in good discipline and good leadership. On a deeper plain, it offers fascinating comment on the dynamics of rank. Strategic

decisions were debated by the whole Greek army. Popular vote appointed and dismissed leaders. Yet the rank-and-file, having set up their officers, gave them complete obedience.

Finally, one other fashionable concept needs challenge: that nations rise, and inevitably decline. Could a foreboding of historical doom enervate the Australian will to live — partly

explain our curious pursuit of the sweet life under gathering storm clouds? Truly, all human affairs have an end, and the earth is littered with the wrecks of empires. But their destructions are dated by hindsight, not by prophecy. The story tells also of peoples who looked up from their feasting, saw the moving finger, stood to arms, and survived.

I realise how difficult it must be for Commanders-in-Chief to find the time to make themselves known to their staff, but a very small effort in this direction produces a very big dividend. It is extraordinary how susceptible a staff officer is to a little notice taken, or by an occasional personal contact with his commander. It is human nature. The staff usually get very little praise and all the kicks.

Montgomery used to keep in touch with the staff as a whole by periodical visits. After some particularly successful operation he would send me charming messages of thanks and appreciation, which would be circulated to all concerned. In addition, he used to walk around various branches of the headquarters at intervals. He would chat easily with high and low, and such visits had a visible effect upon the output of that particular section.

— Major-General Sir Francis Guinand in "Operation Victory".



NAPOLEON IN VICTORY AND DEFEAT, by Lieutenant Colonel T. M. Hunter, Historical Section, Army Headquarters, Ottawa, Canada. (Produced for the Directorate of Military Training, Canadian Army HQ, and obtainable from the Queen's Printer, Ottawa, Canada, at a cost of \$3.00.)

Probably no figure in history, and certainly not in military history, has been more widely and persistently discussed than Napoleon. An incalculable number of words have been written about the man, about his personal life, his activities as a ruler, about his grandeur and his baseness. Soldiers of all nations have tried to find some infallible recipe for victory in the study of his methods and campaigns. All too often, however, many of the books about this colossus that passed across the pages of history have been either too lengthy or tainted with bias.

For the soldier two world wars and the development of new weapons and tactical methods have tended to push Napoleon into the background. For many modern soldiers, particularly those of the younger generation, he remains a shadowy figure. All that a great many of us know about him is what we have

gleaned from the isolated quotation which is employed occasionally to fill up the ends of pages in military journals.

This modern neglect of one of the greatest soldiers and ablest administrators that ever lived is to be deplored. The principles of war and the art of strategy have never been more brilliantly demonstrated than they were in the campaigns conducted by Napoleon. And these campaigns have seldom, if ever, been more brilliantly or more succinctly described than they are in this splendid little volume.

With rare economy of words, Colonel Hunter presents a clear picture, not only of Napoleon the soldier, but of Napoleon the man. Beginning with his early years on the island of Corsica, he sets him in correct perspective against the background of the time in which he lived, against the political scene, the intellectual ferment, the mixture of idealism and materialism into which Napoleon stepped in his youthful, formative years. He shows us Napoleon as a young officer keenly participating in regimental life, going about his everyday duties and finding the time to study a wide variety of subjects.

From that point Colonel Hunter takes us quickly through Napoleon's successive promotions to his first independent command in Italy. There he shows us the young, untried general, through his technical competence and his mastery of the art of leadership, winning the confidence of the hard-bitten veterans under his command. Colonel Hunter summarises his description of the campaign that followed in these words: "His military achievements in the Italian campaign would suffice to rank him with the great captains of war. In a single year he had twice forced the passage of the Alps . . . and had never lost a major battle. In the course of these operations he had revealed more than a genius for strategy and tactics — he had demonstrated a less spectacular, but equally important mastery of military administration and logistics."

Throughout his description of all of Napoleon's campaigns — the masterpieces of Ulm and Austerlitz, the disaster in Russia, Leipzig and the final collapse at Waterloo — Colonel Hunter is at pains to show all the influences bearing upon the major decisions, and to explain and comment on the motives and actions of all the contending parties. Thus his book is a study of strategy at all levels from the field to the council chamber.

Colonel Hunter's crisp narrative is supplemented with excellent maps. The whole book is a model of good presentation. It

is to be hoped that its appearance will lead to a revival of interest in the study of Napoleon, a general whom all aspirants to high command simply cannot afford to neglect.

The Canadian Army is to be congratulated for maintaining as an integral part of its H.Q. establishment an Historical Section which produces and makes available at a modest charge such instructive and absorbing study material.

— E.G.K.

THE HIROSHIMA PILOT, by William Bradford Huie. (William Heinemann Ltd., London, and 317 Collins Street, Melbourne.)

When the first atomic bomb was dropped the shock of the explosion reverberated around the world. Humanity was stunned and appalled by the mighty power unleashed over Hiroshima. Recovering a little, many men tried to rationalise the event by explaining that, while the atomic bomb was certainly the most terrible weapon ever devised, it was, after all, just a more powerful explosive. It was demonstrated, to the satisfaction of any reasonable man, that the atomic bombing of Hiroshima and Nagasaki was by far the most economical way of bringing the war to a close. But it was not reason that was troubling mankind; it was conscience — and terror. In the depths of its soul humanity was uneasy about the dreadful wound it had inflicted on itself, and fearful of the wounds that would be inflicted if reason ran its course.

The yeast working in the soul of humanity found expression in various ways. We are all familiar with "Ban-the-Bomb" movements, peace congresses and the like. We are all aware, or we should be aware, of the fact that one or another aspect of military nuclear power has been the most persistent problem occupying the attention of statesmen for the last nineteen years, a problem that still defies solution. And we should be aware that the opponents of the use of nuclear weapons are not all long-haired youths and scruffy females. Some of the greatest, most illustrious minds of our age, minds tuned to the deeper feelings of humanity, have voiced their protests at the possibility that the nuclear bomb should ever again be employed in any shape or form. Evidence of the remorse and fear working beneath the surface has taken many strange forms. The case of Claude Eatherly, one-time major in the United States Air Force, is one of the strangest of all.

Some time in the early fifties, Eatherly became known as "The Hiroshima Pilot", the man who dropped the bomb. Articles, books and poems were written about him. He achieved world-wide notoriety. Generally the stories ran that remorse had driven him insane, he had become a recluse, he was giving his pension to the survivors of the holocaust, he was being detained by the U.S. Air Force, his troubled mind had driven him to crime. He became an object of world-wide pity, but was it pity for this one unfor-

unate individual or was it humanity sorrowing for itself?

Then William Bradford Huie noticed that there were some discrepancies in the story. Huie is not an advocate of anything. He is neither for nor against the bomb, not professionally anyway. He is simply a reporter of fact, an objective researcher whose only professional concern is to get at the truth and lay it on the line.

Huie's initial investigations disclosed the fact that there were indeed discrepancies in the stories about Eatherly. In the first place Eatherly was not the man who dropped the bomb, he was not the "Hiroshima Pilot". He was merely the captain of one of the aircraft which reported weather conditions over the target area. When the bomb fell he was 200 miles away and he did not even see the flash. And, an important point as further investigation showed, he was left very much in the background of the excitement and hand-shaking when the aircraft that did drop the bomb returned to base.

From that point Huie went on to find out many things about Eatherly, about his life before, during and after the war. It would be a pity to spoil the story by giving here an account of everything he found out, but we may say that all those reputable people who cited Eatherly's case would have been better advised to have made some inquiries first.

Mr. Huie arrives at no judgment. He simply uncovers the evidence and lays it out for us

to form our own conclusions. downright fraud, or was the
For my own part I am more breadth and depth of the feeling
than ever amazed at human generated by his case an expres-
credulity . For the rest I find sion of mass guilt?
myself baffled. Was Eatherly a

— E.G.K.
