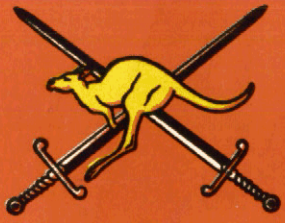
AUSTRALIAN ARMY JOURNAL



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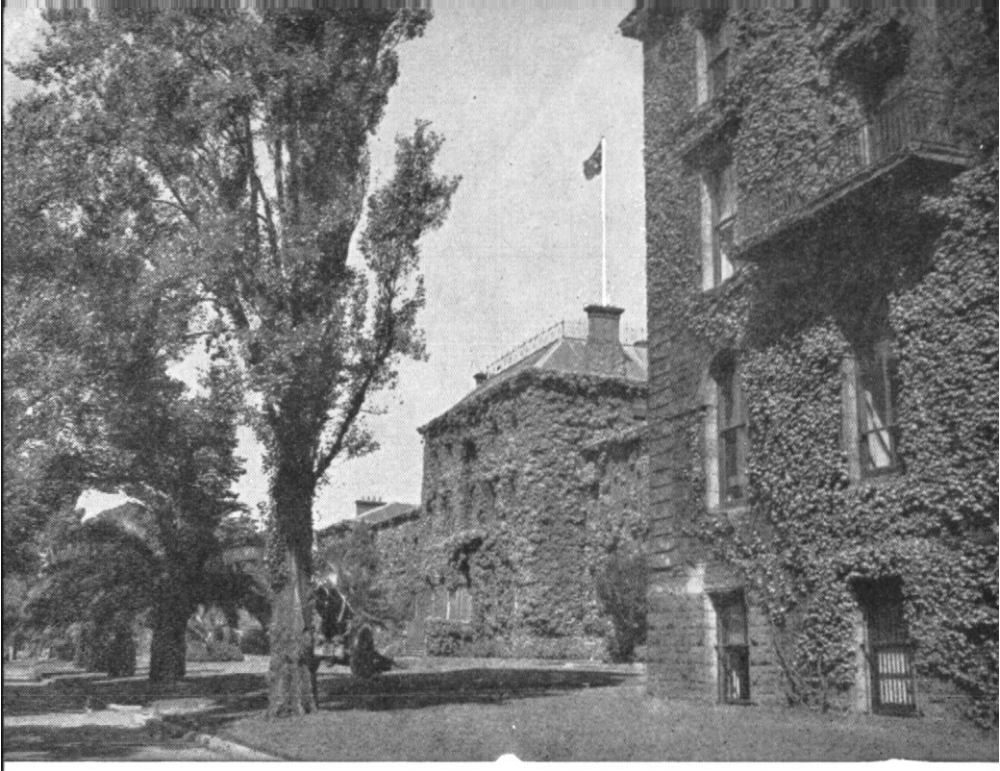

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ATOMIC WEAPONS and ARMOUR

General Geyr von Schweppenburg,
German Army, Retired

(Translated by Sergeant G. M. Carrington, Melbourne University Regiment)

In World War II General von Schweppenburg commanded armoured formations on the Eastern and Western Fronts, where he established a high reputation as a leader of this arm. Since the war he has written and lectured widely on military subjects, and has forwarded us the following article on the place of armour in atomic warfare.—Editor.

VIEWS about the nature of ground fighting in the atomic age differ widely amongst international experts. The situation was aptly summarized by General Ridgway, former Chief of the United States General Staff, when he spoke to American officers of various arms of "the unpredictable nature" of the future conduct of war.

As a background to a discussion of the future possibilities of the role and organization of Armour, it is desirable to make a few introductory observations. This is especially necessary because there is a considerable number of people who think that Armour has passed its peak.

It has been known for a long time that tanks and aircraft can be the best of companions or the worst of enemies. Operations involving the large-scale use of armour demand basically, by night as well as by day, the fire support of the tactical air arm.

Towards the end of World War II the rocket firing aeroplane of the Allies, because of its accurate and deadly fire, had become the major enemy of the German tanks, rather than their ground anti-tank weapons. The air supremacy of the Allies made the old tactics involving large concentrations of tanks impossible. The difference in the situation in the air had the effect that, upon my recommendation, from the middle of 1944 onwards, two different techniques, one for the East and one for the West, were taught in German Armoured Schools.

Due to the possibility of atomic warfare, the old German tactics, as applied during the period of their greatest success, are outmoded and untenable. These tactics were analogous to those commonly employed by Napoleon. They sought to concentrate with the greatest surprise and quicker than it was possible to organize an effective defence, at a point selected at the last possible moment, the maximum number of guns under the protection of the tanks. The breakthrough followed naturally.

I said these tactics are untenable in their present form. However, the synchronization of a surprise atomic attack from the air, with the atomic artillery and rocket launchers of an armoured group, makes it possible to achieve at the selected point of breakthrough a similar effect with a smaller concentration of actual numbers.

We come now to the problem of the maximum use of the shortest space of time. Again this is nothing new.

This was always necessary. Thorough success or failure was associated with the fullest utilization of the first one or two hours after the actual breakthrough.

The question now arises, whether the pairing of the high mobility of armour with the atomic weapon, even under the changed conditions of the atomic battlefield, can be regarded as useful. The answer is that it can.

Armour is an attack weapon second to none. Clausewitz, the great theoretician of war, said in his day that defence was the strongest form of warfare. Even in the early eighteen sixties the elder Moltke had serious doubts as to whether, with the then current development of fire power, the defence was not stronger than the attack. But, after getting over his doubts, he gained his victories through the attack.

The two world wars further proved that the Clausewitz theory did not hold true in practice.

It is of psychological interest to note that the strongest doubts about the future role of armour seem to come from two main sources. Firstly, from the purely theoretically thinking highbrow contributors to military journals, and secondly, from a narrow infantry mentality.

Neither of the representatives of these groups has for any length of time and under differing conditions had the task of forming and training, or leading in battle, large formations of armour on the battlefields of eastern and western Europe. It is the spirit of theorising in the study or in the offices of higher headquarters, and not that of commanding on the battlefield, which leads to the timid theory of the defensive.

A certain amount of protection against atomic weapons can be gained by two means—by high mobility, as with armour, or by digging in. In an atomic war both will be necessary. But a purely passive defence can at the best gain time and will meet, in the best circumstances, encounters of only local or passing value.

Passive defence is unsuitable against an enemy attacking on a wide front. If it relies solely on prepared positions, these will be known to the enemy and can easily be eliminated by an atomic attack, or made worthless through by-

passing. Such an attitude would give the enemy the most important factor—the initiative. It would also give him absolute freedom of action.

It has nowhere been demonstrated that armoured tactics, when developed for atomic warfare, are outmoded. It would not be the first time that the leaders of German Armour have had to adapt themselves to superior fire power.

At the beginning of the Allied invasion of western Europe responsible German Armour tacticians suggested that "tiger in the jungle" tactics should be employed. The theory consisted of lying in ambush small, widely dispersed, but quickly concentrated groups of tanks, and the crossing of no-man's-land at night to enter the enemy's front line.

These tactics were designed to counter the Allied air superiority and its far-reaching effects on the battlefield. With a breakthrough into the enemy's front line, the Allied air support would have to be withdrawn or at least curtailed. Similarly, the atomic defence of the enemy would have to be lifted if confronted with similar tactics. It would be most difficult not to do so, and only Eastern ruthlessness would consider putting one's own lines under atomic fire.

Actually, the ideas of the German Armour tacticians, even though they had the support of Guderian, were not accepted at Hitler's headquarters, and were not put into practice.

In atomic warfare the emphasis has to be placed upon avoiding large concentrations of troops, or, if this is unavoidable, on limiting them severely in time.

The mobile battle groups, which have to be kept small, will have to spread out on the plains in width as well as in depth in a checkerboard fashion. The discovery of movement, detectable from the air by radar by night as well as by day, with the subsequent fire of either airborne or land based enemy atomic weapons, can mean extinction.

The answer to this is the saving of time through the highest speed in the transmission of orders by cutting down the length of the chain of command, and by using the methods employed by the air force and the navy in their actions. The decisions which have to be made by the command have some of the characteristics of the duel—there is always an element of risk.

Today everything points towards a diminution in the size of the battle groups, and for greater independence for them. In order to secure this independence they must have everything they require under their own comamnd. They should have their own reconnaissance aeroplanes, their own helicopters to carry advanced troops, their own cross-country mechanical supply columns, as well as their own air supply and transport aircraft.

The tactical independence of the junior leader will become a prerequisite for success.

With all that, we will need the capacity to change rapidly from attack to defence. This rapid change can be achieved only through the closely integrated use of armour and air power. The necessary degree of integration cannot be achieved unless the ground forces

possess their own tactical air arm.

Now I would like to say something about these new armoured groups. They will have to contain all their associated and supporting arms, including their tactical aircraft. The whole will have to be welded into a fighting unit *in peace*. Even this idea is not new. Before World War II the German armour experts gave it serious consideration.

These new armoured troops will have to take into consideration the fact that the normal routes along roads, because of contamination and the risk of betrayal of their position, will be closed to them, and that in addition the only, if partial, protection against atomic attack can be gained through mobility. Therefore it is of the greatest importance that *all* vehicle should be capable of continuous cross-country movement.

All these considerations limit the size of such a pocket striking force to a strong armoured regiment (brigade) with the nucleus consisting of a strong battalion of mounted infantry, divided into five groups. Such a force, even with the attached troops, could still be led at night. Since the loss of complete troops has to be foreseen, their quick replacement from reserves held in depth should be planned for. Up to seven such groups would come under a corps staff. To shorten the chain of command the division is left out.

The supplying of such troops would be the most difficult part of an atomic war. At present it seems that this can be solved only through two measures. The first is the supply by helicopter operating at night. The second is that each troop should carry an iron ration of food, ammunition and spares. The supply of fuel from the air will have to be done mainly under cover of darkness. The high risk of their method of air supply will have to be accepted.

In war many things are risky. The calculated risk is the seed of success. The question whether the attack, even under cover of night or twilight, under radar watch and against atomic defence, is still possible cannot be answered fully in peace. Only when the situation becomes serious will it become known whether the means used are sufficient to gain and hold the initiative.

At the beginning of World War II the German Armour was regarded by many responsible German military leaders as a novel toy which would have to be replaced by infantry as soon as the going became serious. The first big battle of destruction, the battle of the Corridor, against bravely fighting Polish troops, brought the proof of this error, through the success of the Berlin Panzer Division and through the success of the first big night battle of tanks versus infantry on 2 September 1939. The unbreakable spirit of the attack had won over doubting indecision.

MARRIED SOLDIER

Bedouin or Troglodyte?

Lieutenant-Colonel A. Green,
Royal Australian Army Service Corps
"Caesar in hibernis ivit"

The ARA soldier faced with married accommodation problems must envy Caesar's legionary the ease and simplicity with which he entered his Gaulish winter quarters. It is true that modern civilisation is based largely upon the acquisition of comfort-bestowing impedimenta, whereas the Roman soldier travelled comparatively light, far and fast on a man-pack basis. Paradoxically, in the Atomic Age, when mass production, automation and similar benefits of science are lightening the physical burdens of living, the lot of the married regular soldier appears to deteriorate rather than improve.

This problem is rendered more acute by the intense developmental stage of contemporary Australia. Nevertheless, the cries of distress which ascend from personnel branches in the free world from Washington, DC, to Wellington, NZ, serve to emphasize the fact that this is not a local phenomenon, but a commonplace of our time. Despite pay reforms, and other professional palliatives, Anglo-Saxons are proving tardy recruits to the

profession of arms, and the principal deterrents are economic and domestic, particularly in the field of married quartering in Australia.

To Quarter or Not to Quarter

There are two main schools of military quartering. They are—the Tough School, which contends that no married soldier is worth his salt; and the Humane School, which does everything in its power to facilitate the welfare of the married soldier. The Tough School flourished in English-speaking armies until the late 'thirties. Some conservative commentators, notably the naval writer, Commander Russell Grenfell, contended that marriage allowances and married quarters were luxuries, and, furthermore, being discriminatory against the equally, or more, valuable unmarried serviceman, had no validity in logic. At the time this system flourished, the marriage of young soldiers of all ranks was discouraged, even penalised, privileges of married accommodation being limited to the older and senior members of units, on a restricted scale. Nevertheless, it was obviously impossible to legislate prohibitively against the marriage of soldiers, since it is public policy that all citizens should, in the national interest, marry. In more recent times, as the Humane School came into power, and was stimulated by the poor response to regular army recruiting, particularly in Britain, the bars against marriage and the occupation of married quarters were, in the main, relaxed in theory.

In Australia, the official policy in these matters is definitely that of the Humane School. Early British garrisons began the tradition of building a proportion of solid married accommodation, and in the case of the New South Wales Corps, an advanced tradition arose of freehold acquisition, which still appears to persist. This was at a time when British Army quartering was a public scandal, and soldiers' families were accustomed to accommodation in the curtained corners of bachelors' barrack rooms. In the years between the two world wars, when the regular forces were essentially cadres, and public building was adequate to satisfy civilian and military requirements for homes, there was no acute problem in accommodating the soldier.

The Problem

During and since World War II a real and vital married accommodation problem has arisen, which is striking at the very morale, mobility and efficiency of the regular army to this day. This problem is primarily due to the concomitance of a manifold ARA expansion with the extreme pressure of indigenous and migrant population growth upon the limited building industry. This directly results in a persistent incidence of family separation; compassionate postings through appeals to military or political intervention; and wholesale attrition; by unwillingness to re-engage, compassionate discharge, and illegal absence. This state of affairs is well exemplified in the difficulty experienced in moving key personnel between military stations, and in the outcry from members of units and installations when they are called upon to move bodily from metropolitan areas into less favoured country areas. It is also manifest in the number of military families

eking out existences in sub-standard accommodation adjacent to ARA units.

The availability of the regular soldier for service anywhere in the Commonwealth or overseas is a primary requirement of his profession. It is therefore obvious that, when domestic difficulties enable the soldier to avoid this obligation, the value of the man to the army and to the Commonwealth has been gravely diminished. Moreover, this loss of mobility accentuates the already ingrained provincialism which characterises many of our soldiers, who are thereby encouraged to become prematurely static in the State of their choice. If this pernicious trend should increase, then a large proportion of our army will cease to benefit from that periodical rotation in units, types of employment and varying areas, which should normally do so much to broaden, deepen and mature the professional knowledge of our professional soldier.

House Ownership

There is a pioneer variant of the Tough School which, although not as ambitious as the old New South Wales Corps, insists that every soldier who aspires to be a good citizen should own his own home. As a result of this influence and of the desperation which many soldiers have experienced in failing to obtain married quarters, many soldiers have embarked upon house purchase. The initial disadvantage of this course lies in the difficulty which any itinerant serviceman must experience in acquiring the several thousands of pounds which are necessary to purchase even a modest suburban home. Soldiers with a modest capital, or those entitled to War Service Homes facilities, have been fortunate in securing freehold homes. Nevertheless, for the average man, the outlay is a very high first hurdle; since, apart from the difficulty of initiating such a purchase, the soldier is further expected to enter the speculative property market. Not only must he gamble on the future sale value of his property in the event of a posting, but he is charged commissions and stamp duties which, in themselves, are expensive. Fortunately for these forced speculators, during the post-war period of inflation the nominal value of property has steadily appreciated, and many homes have, in fact, proved sound investments. Such a state of affairs will not necessarily continue indefinitely, although house owners hope that it will. House purchase has become so common among ARA members that it is quite normal to encounter the young junior NCO or young newly commissioned officer contemplating matrimony and house purchase before he has had worthwhile Interstate or overseas military experience, or has enjoyed that healthy freedom which makes him a mobile and happy professional soldier.

House ownership may even have a damaging effect upon the efficiency and availability of the soldier. We are all familiar with the member who invests the major share of his interests, energy and even time in home construction and beautification, leaving the balance for the army. There are also recurrent examples of the resignation and discharge of soldiers who refuse to be posted away from their private homes, and rarer cases of the sep-

aration of the willing soldier, who accepts his interstate posting, whereas his wife, being house-proud, prefers to remain in the home. These effects are obviously deleterious to the Army and the soldier.

Rented Accommodation

The soldier who is unable or unwilling to become involved in house purchase and requires married accommodation when it is not available from Commonwealth sources, is forced to search for suitable economical rented accommodation. This is almost universally a difficult and discouraging task. Rents, particularly for furnished accommodation (and there is very little unfurnished accommodation available in metropolitan areas), are very high. In fact, they are so good, for the owner, that it is not an uncommon irony for regular soldiers owning property to protest that a rent within the economic capacity of a fellow soldier would be unremunerative to themselves. The army has done much to alleviate the effects of high rents, particularly during the first year or two years of occupation, by subsidizing the married soldier to a prescribed degree. This process is only a temporary expedient, and leaves the problem of providing permanent accommodation for the regular soldier unsolved.

Questionable Economies?

It might be supposed that the Commonwealth, hampered by building difficulties and the non-availability of funds, acted from reasons of economy in causing a large proportion of regular soldiers to make their own arrangements for married accommodation. However, on further examination this contention must be challenged. It is estimated that one soldier in four is married, and that the average incidence of postings would be of the order of once in three years. The cost of moving the soldier's chattels interstate is high. It will thus be seen that, when thousands of soldiers have to be moved annually, each move costing one or more hundreds of pounds, the total annual bill for Army removals must be one of six or seven figures. This is unproductive recurring expenditure. Furthermore, there are tangible losses to the ARA, caused by wholesale attrition due to accommodation difficulties. This wastes the former expenditure on recruiting and training the soldier, and necessitates additional expenditure in obtaining his replacement, if indeed such replacement can be found. Less tangible, but equally real, losses are those inflicted upon the morale and efficiency of the service as a whole.

The present military accommodation problem appears to result partly from military and economic causes and partly from an insular view of the requirements of the army. In an area as vast as that of the Commonwealth and its territories it is essential, for economic and morale reasons, that the Government provide both accommodation and furniture for every soldier who is reasonably entitled to married accommodation. The provision of this type of accommodation would lead to a happy married soldier element, and would render soldiers available for immediate interstate posting with considerably less unproductive outlay than is re-

quired at present. The Royal Air Force has for many years maintained fully-furnished accommodation for entitled married personnel and has, as a consequence, been able to post its airmen to any station, at home or overseas, with a minimum notice. Until we achieve that state of affairs in the ARA we cannot acquire the true mobiquitous spirit of a professional arm with continental responsibilities.

The foregoing considerations should not lead the reader to suppose that the army itself, and the other departments concerned, have made no effort to provide accommodation. Such a conclusion would be quite erroneous. Considerable and substantial building programmes have already been carried out, or are in progress. Nevertheless, they are still inadequate to the army's full needs. It appears that the political policy makers are unwilling or unable to accord the soldier any priority over his civilian counterpart in housing. Since the soldier, and with him his family, accepts Commonwealth-wide, nay, world-wide, obligations, it is surely elementary justice that the accommodation and welfare of his family should receive a due measure of priority. This demand is accentuated by the fact that some of the disadvantages of interstate movement, notably the ill-effects upon the education of children, are virtually unavoidable and incorrigible.

The financial expert may demand solid assurances that the wholesale building of married quarters, say three thousand family homes, would, particularly in remote areas, be a legitimate investment of public funds, and not lead to waste and losses. In reply, it should be noted that there are few areas in Australia in which new property construction will not prove of permanent future value. Moreover, the soldier's rent is fixed by the Commonwealth, and is automatically collected. An investment of say ten million pounds in building married quarters would be justified by the positive improvement in the army's efficiency, and by the appreciation of the capital asset and the receipt of regular rent.

A Solution

Married accommodation worries probably constitute the greatest single enemy of Army morale and are a permanent deterrent to recruiting. They will not be solved until the problem of married quarters is fully comprehended as that of a continental and not of a petty insular army. If the evils of immobility, avoidance of postings, separation of families, premature burdens of house purchase, State provincialism and low morale, are to be eradicated in the married soldier, the only course remaining is the wholesale building and furnishing of married quarters in sufficient numbers to house the entitled soldier wherever the army normally requires him to go. The remedy is therefore political rather than military; fiscal rather than material; and lies in the wholeness of the solution, rather than in any existing partial palliative.

Peripheral Wars

Brigadier General Paul M. Robinett,
United States Army, Retired

THE term "peripheral warfare" can be regarded only as a catchword of very recent origin. So far as can be determined, journalists had used the term when Navy Captain John B. Hayes introduced it into professional military literature in an article entitled "Peripheral Strategy — Mahan's Doctrine Today" appearing in the *United States Naval Institute Proceedings* for November 1953. The article was changed slightly and then reprinted as "Peripheral Strategy . . . Littoral Tactics . . . Limited War," in the September 1954 issue of *Combat Forces Journal.*

The peripheral concept as enunciated by Captain Hayes is defensive, envisaging as it does the containment of an aggressive power. Specifically he envisages the containment of the Soviet Union within the Eurasian Continent, less certain portions in the south; being a Navy man, Hayes is attracted by the shoreline.

In his book, *The Day of the Saxon,* Homer Lea has written that:

All national frontiers are subject to constant fluctuation, and must be forever shrinking or expanding. They can no more remain delimited than can the coastline of oceans, for they are those indefinable shores where break the restless, turbulent seas of life.

He goes on to explain that there are:

. . . four degrees of expansion— territorial, economic, political and racial. These degrees of expansion are in turn dependent not alone upon the potentiality of the expanding state but also upon the receptive condition of that country toward which its energies are turned.

Lea gives his ideas of the outcome of a policy of containment as follows:

Whenever one nation, in the extension of its sovereignty, is circumscribed and limited by another nation, and at the same time possesses equal or greater physical power, then the encompassing nation is destroyed, since a state of equal or greater military power occupying interior lines is as many times stronger as there are political

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—From the Military Review, USA.

segments in the circumscribed circle.

The elemental weakness of an encompassing nation is that, being territorially vaster, it acts on the defensive. This defence is not equal to, but is less strong than, the defence of the strongest part. The weakness is proportionate to the number of entities composing the empire and the degree of their segregation.

The military power of the encompassing nation must always exceed that of the nation encircled in that proportion which ensures the restriction of the theatre of war to the territory of the encircled nation.

The subjugation of an encircled nation must be complete to result in victory to the encompassing nation. On the other hand, the defeat of a single segregated entity of the encompassing nation may result in the complete downfall of the whole.

The Roman Empire

The best historical example to illustrate Lea's theory is that of Rome. From the very foundation of Rome, almost until the time of its greatest growth, Roman policy was expansionist. It meddled in the affairs of all contiguous nations, and won them by political or forceful means, most often by conquest. Roman legions finally advanced as far as Scotland and the Elbe in the west, the Danube in central Europe, the Tigris in the east, and the Sahara in the south. Upon assuming the royal purple, Augustus soon changed the expansionist policy of Rome to that of defence, although some acquisitions were made after this policy was adopted, notably in Dacia. The Great Wall in England, the line of the Rhine, the Alps, the Danube, the Black Sea, the Tigris, and the Sahara Desert became the defensive perimeter of Rome. Incursions of barbarian peoples were successfully beaten back for many years; but finally the Roman people, debauched and changed by the introduction of alien stocks and weakened by internal strife, were overwhelmed by a flood of barbarians from beyond the borders.

Nazi Germany

Nazi Germany furnishes a historical example of an expansionist state which lacked the force to execute its policy. Disarmed and surrounded by a hostile coalition, Hitler, nevertheless, launched upon an ambitious programme of expansion, taking advantage of weaknesses existing in the opposing coalition and its armed forces. He first initiated rearmament, then occupied the Saarland, Austria and much of Czechoslovakia. In collaboration with the Soviet Union he next destroyed Poland in a short campaign. This resort to force at last brought France and Great Britain to the realization that they must fight. But before they came to this decision they had lost all their central European allies and their land forces had become obsolete. Germany next seized Denmark and Norway, and defeated and occupied the Low Countries and much of France. Having cleared and occupied the Balkans, Germany attacked the Soviet Union. She lacked the force to succeed in this undertaking, and was totally defeated under the impact of attacks from the west and east.

The Soviet Union

The expansion of the Muscovite principality into the Soviet Union has followed the pattern of Rome. From the very beginning it has advanced its frontiers by intrigue, political trickery, subversion, economic pressure, and force.

Captain Alfred T. Mahan in his book, *Naval Strategy*, has said that:

Militarily, Russia as a nation is not enterprising. She has an apathetic bias toward the defensive. She has not, as a matter of national or governmental decision, so grasped the idea of offence, nor, as a people, been so gripped by that idea, as to correct the natural propensity to defence, and to give defence and offence their proper adjustment in national and military policy.

This is believed to be a naval man's idea of Soviet policy. From the point of view of the Soviet Union as a land power, Mahan was mistaken.

The Soviet Union, taking advantage of internal weaknesses of neighbours in the west and the defenceless peoples in northern Asia, the impotence of China, and the isolation of Japan, extended her empire both to the west and to the east. She eventually completely upset the political and military situation on the Asian mainland in the north-west Pacific region.

The present rulers of the Soviet Union have inherited the records and the system of their predecessors. They have merely improved the disruptive techniques of older times without changing the purpose. The basic tenet of the Communist regime is unquestionably world domination.

During or subsequent to World War II the Soviet Union absorbed the Baltic States and parts of Finland, Poland, Czechoslovakia and Romania, and the Kurile and Sakhalin Islands, reduced Poland, a part of Germany, Czechoslovakia, Hungary, Bulgaria, and Romania to dependencies, and made China into a satellite. This satellite is itself on the march, and already controls vast additional territory.

In spite of Soviet expansion, however, there is a certain geographic weakness to be noted in the Communist world. It is like an unbalanced dumbbell with the larger and more important part of the dumbbell in eastern Europe and the smaller in the Far East. The two centres of power are connected by the tenuous line of the Trans-Siberian Railroad. All the advantages to be gained from a central position are, therefore, not possessed by the Communists, for the centre of power is not centred in their vast territory. The greatest danger is that the Far Eastern centre of power may grow until it approximates that in the west. If this should come about and the two centres of power should work in complete harmony, the danger to the Western World would be infinitely greater than it is today.

Japan

Japan, usder the urging of the United States, reversed her isolationist policy in the late nineteenth century, and after a short period of modernization adopted an aggressive policy of expansion. After defeating China and acquiring Korea, she next defeated Russia and gained important concessions in Manchuria and Sakhalin. But Rus-

sia retained a hold on the Pacific while Japan was becoming a continental power.

Taking advantage of the situation in Europe during World War I, Japan acquired German concessions in China and penetrated deeply into Russian Siberia, only to withdraw when left to face increasing Communist resistance.

From the Mukden incident of 1931 Japan was drawn deeper and deeper into Asian affairs by Chinese non-co-operation and open resistance. The Soviet Union, which had managed to maintain and hold a position on the Pacific, supported this resistance by all means short of open warfare.

When Japan became overextended and tied down by the war in China, the Soviet Union initiated a series of border incidents after 1935, in which she sought to tie Japan down further and to secure intelligence and strategic points on the frontier. Later, when the Soviet Union became involved in a war with Germany in 1941, a neutrality pact was signed by the Soviet Union and Japan, and the border incidents ceased for a time. Some of the earlier incidents, notably the one at Nomonhan (May to September 1939), were small wars involving troops of all arms. In that affair the Soviets used five infantry divisions and five or six tank brigades supported by air. The battle continued for about two months.

The border incidents were resumed when the war against Germany took a favourable turn in the west and after the Soviet forces in the Far East had been greatly strengthened. These incidents were increased before the Soviets renounced the neutrality pact and attacked Japan in August 1945.

Great Britain

The record of Great Britain has always intrigued navy men, for the position of that great nation was built largely on the success of its ships. After a prolonged but unsuccessful dynastic attempt to win France, the English followed a balance of power policy in the affairs of Europe while extending their empire around the globe by seizing key geographical localities and by occupying vast and weakly occupied or governed territories. With those advantages Great Britain eventually controlled much of the overseas trade of the world, and in time developed a powerful industrialization to support it.

Military operations in support of the rising empire were based upon a navy capable of exercising undisputed control of the seas and a skilled, highly disciplined regular army, supported overseas by territorial militia. This policy was highly effective at a time when communications were poor and much of the world was inhabited by peoples in a low state of political development, unfired by dynamic ideologies, deficient or devoid of industrialization, and lacking up-to-date armed forces. As an indication of the magnitude of her land operations during this expansion, it is interesting to note that until the time of World War I no British general, except Wellington at Waterloo, had commanded more than approximately 60,000 British troops in actual battle.

The British Empire reached its zenith during the reign of Victoria.

Since then the British have been drawn into two great wars in support of their balance of power policy. Although surviving these wars, the foundations of the Empire were seriously weakened.

Conclusions

As Clausewitz has said, "war is but a continuation of policy by force." Policy, therefore, determines the extent and place force is to be used and where resistance will have to be made. A nation's long-range policy is thus more difficult to detect than the forces which are prepared to back it up. This is true because in a totalitarian state policy can be concealed within the minds of a very few men at the top, whereas the actual troops and weapons are hard to conceal for any great length of time. When policy is openly stated, as in "unconditional surrender" at Casablanca, one nation at least has given away its hand in the game of world politics.

The shock of the great wars of the twentieth century upon mankind was indeed very severe. Improved communications and weapons, perfected during the first half of the century, made possible the centralization of power in a few men of the industrial nations. Dynamic ideologies were at hand for the use of unscrupulous leaders, and shattered economies, hunger and want, and lowered spiritual and ethical standards provided a favourable seed-bed for their propagation.

It can be concluded that containment, accompanied by little wars on the periphery of enemy-held or dominated territory, is only a tactic and not a form of warfare. It is a delaying action which cannot win a decision. Containment may postpone a decision until more favourable conditions prevail, but this is only one possibility, for delay may lead to more unfavourable rather than favourable situation.

INFANTRY ASPECTS OF ARTILLERY FIRE PLANNING

Major W. A. Whyte, MC
Royal Australian Artillery

DURING my recent association with a CMF formation, one of the questions most frequently asked me by infantry officers at TEWTs and during preparation for examinations was: "How much of this artillery stuff do we really need to know in order to be able to do our part in making the fire plan?"

From the infantry point of view this is a very real problem, since, while on the one hand it is essential that the infantry officer knows enough about artillery to be able to use it to his advantage in battle, on the other hand the application of artillery fire is a vast subject, to thoroughly master which takes years of study. It is always difficult to reduce a subject of this nature to the "musts"; there are so many points which, to each individual, have an equal importance. In this article I have outlined those aspects of artillery fire planning which I consider it is essential that each infantry officer should know. Any officer who has time to do so may study the "shoulds" and "coulds" in Artillery Training, Volume 1, Pamphlet 1.

I have made no attempt to discuss the question of "Command and Control," since this subject was ably covered by Lieutenant-Colonel A. D. Watt in his article "Command and Control of Artillery in a Nutshell," which appeared in the January 1955 issue of the *Journal*. I have also confined my subject to Field Branch Artillery, since the integration of AA Branch Artillery into the fire plan is not normally a matter for consideration at lower levels.

Background to the Problem

To the infantry, battle is a series of actions which should be based on the principle of fire and movement. Fire means fire power in its broad sense. The co-ordination of the whole fire power available to him

into a fire plan, in conjunction with his movement plan, is the task of the infantry commander. To assist him with advice and to prepare the technical detail of the artillery fire plan is the task of the artillery commander. To win a battle two things are essential:—

(a) A sound tactical plan.

(b) *Efficient fire planning.*

Remember that the overall plan (which includes the fire plan) is the responsibility of the infantry commander. *In working out the overall* plan the infantry commander will frequently be influenced by the amount and type of fire power available to him.

The Artillery Task

To the gunner, fire power does not necessarily mean gun power, the shell not the gun is the weapon. It follows therefore that a small number of guns well handled tactically and technically will achieve much better results than a large number of guns poorly handled. The overall aim of artillery is to support the infantry during each successive stage of a battle with the maximum fire power at its disposal. The effect on the enemy should be to cause delay, destroy earthworks and equipment, cause casualties to personnel and generally to lower morale.

Responsibility for Planning

Generally the infantry commander has a joint responsibility with the artillery commander only where the intimate support of troops is concerned. There is no firm division of this responsibility, but it is normal for the infantry commander to decide on the type of artillery support to be adopted and to state what he wishes it to achieve. Within this framework it is the duty of the artillery commander to prepare the detailed fire plan.

In those forms of support not closely connected with movement or dispositions of forward troops, detailed fire planning will be the duty of the artillery commander alone, based on policy laid down by the formation commander.

What the Infantry Commander Must Know

In order that he may make the best possible use of the artillery allotted to him for his fire plan an infantry commander must know:—

(a) The role of artillery units and the effect that can be achieved by each unit.

(b) Targets required to be engaged, details of timings and the weight of fire required *on each target.*

(c) Types of artillery fire and the methods of application of fire.

In considering these essentials in detail, discussion is confined to gun units which could reasonably be expected to support an infantry division, i.e., field regiments, *light* regiments and medium regiments.

Role and Effect

Field Artillery

The role of field artillery is the intimate support of the forward infantry with covering fire, defensive fire and smoke screens. To enable it to carry out this role, the shell of the field gun has a good neutralizing effect, but the lethal radius is small enough to allow our own troops to approach close to the bursting shell. It is also provided

with an efficient smoke shell. Because of the requirement for close support, the shell of the field gun is necessarily light and consequently the only effect which can be expected from the bursting shell is neutralization.

Light Regiments

The role of the *light regiment* is to supplement the field artillery by providing covering fire in depth and to the flanks, and by carrying out counter mortar tasks. The characteristics of the 4.2 in. mortar, which largely determine its tasks, are high trajectory, large beaten zone, and high rate of fire. The mortar fires a bomb which has a good neutralizing effect and a large lethal radius. This, coupled with the characteristics already mentioned, makes it most suitable for neutralizing areas not closely connected with own troop movement or dispositions, and especially targets which are located behind high cover. The mortar is not designed to engage targets which require a high degree of accuracy or a measure of destruction, and it is wrong to employ it for such tasks.

Medium Artillery

The role of medium artillery is to supplement the field artillery by undertaking such tasks as counter-bombardment and long-range harassing fire, for which longer range and heavier shell are required, and by adding weight and depth to covering or defensive fire provided by the field artillery. The medium gun fires an 80 lb. shell and has a high degree of accuracy. The shell has a good neutralizing effect but a large lethal radius. This makes it unsuitable for engaging targets closer than 400 yards to our own troops. The accuracy of the gun together with the weight of shell make it particularly useful in tasks for which a measure of destruction is required.

Targets, Timings and Weight of Fire

Targets

Where the intimate support of his troops is concerned the selection of targets is mainly the responsibility of the infantry commander and is part of the mechanics of his tactical plan. Good target selection is essential, and can only be based on accurate and up-to-date information. The gathering of information is an all arms responsibility. Every commander should be aware of this and ensure that the liaison and communications essential for rapid passage of information do exist. In this respect it should be remembered that artillery units have special facilities for observation and communication, and therefore are in an unrivalled position to provide information. In the final selection of targets close co-ordination is required between the infantry commander and his artillery adviser in order to determine the priority of tasks and the effect required on each.

Timings

Battle is a process of fire and movement, and timings are the flux which enables these two to be welded into one tactical plan. In order to achieve the optimum result from artillery fire it must be directly related in time to troop movement. Timings of troop movement are the responsibility of the infantry commander, who must work them out carefully after full

consideration of all the factors involved. Having worked out his timings, the infantry commander will inform the artillery commander of these and discuss with him the time at which fire should commence on each target and for how long it is required.

Weight of Fire

Weight of fire will to a large degree determine the effect which our fire plan has on the enemy. It is better and simpler for the infantry commander to express "weight of fire" as the effect he wants, and leave the artillery commander with his technical knowledge to apply rates of fire, type of ammunition, etc.

Types of Fire and Methods of Application

All phases of war are a compound of attack and defence, and the types of fire by which artillery supports an action by other arms are directly related to these. They are as follows:—

(a) In Attack—
- Preparatory bombardment.
- Covering fire.

(b) In Defence—
- Defensive fire.
- Covering fire (support for counter attack).

(c) In Attack or Defence—
- Counter bombardment.
- Harassing fire.
- Smoke screens.

Methods of Application

There are two methods of applying artillery fire:—

Barrages.

Concentrations.

Within these two methods there are numerous technical variations, and it is in these variations that most infantry officers get lost. Basically it is only necessary to know the essential pros and cons of each, which are as follows:—

Barrage

A moving belt of fire, providing a screen behind which the attackers advance. Barrages can be made to conform to any shape, but should be kept as simple and straightforward as possible.

In cases where little is known about the enemy, and his positions cannot be definitely located, it ensures that all enemy on the ground over which it passes are to some extent neutralized.

Barrages require a lot of guns and ammunition.

Technically difficult, they take considerable time to prepare and promulgate.

Concentrations

The fire of any number of guns directed on a particular target.

Concentrations may be fired with all guns directed at one point (pinpoint concentrations) or spread on a line between two points (linear concentrations).

This is an effective form of fire when enemy positions are known in detail or can be estimated accurately.

It is economical in ammunition, since all ammunition is fired at known or suspected enemy targets.

It has the advantage that the weight and duration of fire can be suited to each target.

Technically easy, it does not take long to prepare and promulgate.

Types of Fire

Preparatory Bombardment

Preparatory bombardment takes place before H hour, and is nor-

mally associated with large-scale operations. However, it may be applied at battalion or even company level. The aim of this fire is to weaken the enemy resistance to our assault or even to demoralise the enemy so that he will offer little or no resistance. Targets should include defensive works, troop dispositions and concentrations, HQs and centres of communication. If resources are insufficient for a heavy preparatory bombardment, consideration must be given as to whether it is worthwhile, bearing in mind that surprise may be prejudiced, or whether it would be better to concentrate available resources on covering fire. A brief but intense preparatory bombardment on carefully selected targets immediately before an attack may on occasions be valuable.

Preparatory bombardment takes the form of concentrations.

Covering Fire

The aim of covering fire is to neutralize enemy small arms and anti-tank weapons which can engage the assaulting infantry in an attack or counter-attack. It must be planned in advance, and takes the form of barrages or concentrations, frequently a combination of both. It can be at call to the attacking troops or may be in accordance with a timed programme. Provision should be made for FOOs with guns at call to engage targets which have been omitted from the planned programme.

In selecting targets for covering fire, care should be taken to see that enemy positions outside the actual "lane of assault," but which can bring effective fire on assaulting troops, are adequately dealt with.

Defensive Fire

The aim of defensive fire is to disorganize the enemy's preparations for attack, and to break up his assault if it is delivered. The aim conveniently subdivides this type of fire in two, and to a great extent determines the selection of targets. The two types of defensive fire are:—

DF in depth and
Close DF, including DF (SOS).

DF in depth is to disorganise the enemy's preparations for attack or counter-attack and to inflict casualties on his reserves. It naturally follows that targets selected cover HQs, communications and rear assembly areas, which have no direct bearing on the close fighting.

Close DF tasks are sited to break up the leading waves of the attack on the start line or during the actual assault. Some tasks will be sited quite close to the defensive position. Those tasks which cover the most dangerous approaches are nominated by the infantry commander as DF (SOS) tasks. While there is no reasonable limit to the number of DF tasks that can be arranged and recorded, the infantry should understand that, particularly with close DF, artillery tasks must be reserved for the most likely lanes of approach, and for those parts of the front which the infantry cannot properly cover with their own weapons. There can be only one DF (SOS) task for each field battery, medium troop or light troop in direct support. DF (SOS) tasks can be changed at any time at the request of the battalion commander.

DF tasks take the form of concentrations.

Counter Bombardment

The aim of CB is to destroy or neutralize the enemy's guns and mortars. CB work is continuous, and includes collection and collation of data by the CB staffs as well as actual engagement of hostile weapons. The CB policy, whether "active" or "silent," must be decided by the formation commander. An "active" policy will give an ascendency over the enemy by engaging every located hostile battery. A "silent" policy allows location of the enemy layout without disclosing this knowledge or causing him to move guns, so that when action is taken its effect is heightened by surprise. The policy adopted is often a compromise between these two extremes. Policy on mortars is normally "active," since these weapons move frequently, and to be effective retaliation must follow quickly on a location. The times during battle when a CB programme may be decisive are:—

(a) During the period of forming up and crossing the start line.

(b) During reorganization.

(c) Immediately prior to an enemy attack and during his assault.

The planning and conduct of the CB programme is not normally done at battalion level.

CB tasks take the form of concentrations.

Harassing Fire

The aim of harassing fire is twofold:—

To reduce enemy morale by interfering with his movement of troops and supplies, and by allowing him no rest.

To force him to deploy early, and thus lose time.

Targets are not closely connected with forward troop dispositions and planning and co-ordination are normally done at brigade and higher levels. Targets will include troop concentration areas, supply dumps, HQs and communications.

Harassing fire takes the form of concentrations.

Smoke Screens

These are designed to blind enemy observation, preventing observed artillery fire and aimed small arms fire, and to screen movements of our own troops. Given good weather conditions, smoke screens are a most economical form of fire. A proportion of smoke fired in an HE barrage or concentration may impair the enemy's vision and increase his confusion. Care should be taken in planning to ensure that smoke does not blind or impede own troops, either on the commander's own front or that of a neighbouring formation.

Conclusion

There may be a doubt in the minds of some as to whether, with the advent of atomic missiles, the contents of this article are not slightly redundant. To this I would say "definitely not." The requirement for a supporting fire plan will always remain, and although the type of weapon and units may change there will still be the same task, the same responsibilities, the requirement for the same types of fire to cover each stage of battle. Does it matter whether CB is carried out by a regiment of medium guns or one atomic cannon? What does matter is that it will be more necessary than ever for every infantry commander to know his task and responsibilities in the making of his fire plan.

From a Monthly Letter of the Royal Bank of Canada

THE magic of words lies in the power they have, when properly chosen and arranged, to convey to other people what we wish them to know of what is in our minds.

Every word we write goes out on an errand. Skill in saying what we *mean so as to get the result we* desire is not a literary frill around the edges of business and social life. It is an essential part of life, our only means of intellectual contact with the world around us.

We have developed communication to a high technical standard. We can talk with someone at the other side of the world, and we can bounce a radar beam off the moon. But we may live to enjoy these luxuries only if we learn to converse more effectively with one another about such things as the atom bomb.

On the level of social and business life the ability to communicate freely and intelligently is needed if our important thoughts are to be *well-formulated and carried into* action. All of us have experienced the provoking state of knowing things of deep meaning but finding, when we came to express them, that we forgot the words.

How superior in its efficiency and attractiveness is the letter we receive from a man who uses dynamic words that give needed information by contrast with the letter we receive from a man who has the lazy

habit of using limp words that leave us doubtful about his meaning and inspire us not at all.

The first question to ask one's self when starting dictation in the morning or sitting down to write to a member of the family is not "What words shall I use?" More pertinent questions are: "Why am I going to write this letter? To please myself? So that the carbon copy will make a good impression on the man higher up? To carry a thought of mine to the person I am addressing?"

Words are a means of saying things. A sermon, an excuse for failure to do something, an essay like this, a legal decision or brief, a letter home, a tender for a million dollar order: what are these but words? But they are words that the writers have learned to put together in such a form as to accomplish the purpose they have in mind.

The Best Word

There are two ways of appraising the rightness of a word: by its effectiveness in saying exactly what we wish it to say, and by its sound or its appearance. Some words, though acceptable or passable in conversation, are not legal tender in writing; other words, properly and effectively used in writing, seem pretentious in conversation.

Quite often, the choice between a right and a wrong word is not dictated by a book of reference, but by the writer's perception. Everyone of moderate education knows how words that are associated with the commonplace grate on the eye or ear when used in more formal or more tender communication. This sensitiveness to the rightness of words can be developed.

It would be a mistake to become over-dainty. While it is true that we benefit by knowing that words have ancestors — Greek, Latin, Anglo-Saxon, and all other sorts— it is not necessary to know a word's genealogical tree before using it. Does it say what we mean? Is it appropriate in its setting? Do we like it?

Our choice of words should not be dictated by hard-and-fast rules. Letters and articles composed by people who follow the book slavishly are likely to be accurately dull.

But it is well to have some rules. For example, the rule about preferring short words to long is a good rule for general occasions. When we have a choice between two words that convey our meaning equally well, we should use the short and familiar one. But the other word should not be rejected merely because it is long and unusual if it is more fitting in meaning. It is the inappropriate use of long words that causes trouble.

Good usage of words cannot be learned from dictionaries and grammars, still less from a brief essay like this. Language lives in use. To use a word well, and even forcibly, we do not need to "know what it means" in the sense of being able to say "this word means so-and-so." We do need more than casual acquaintance with good literature, so that an instinct towards the first-rate directs our choice.

Those who are interested in the structure of words and how they are built into correct sentences will find much that is useful in the Fowler books — H. W. & F. G. Fowler: "The King's English," and H. W. Fowler: "A Dictionary of Modern

English Usage," published by the Oxford University Press.

About Definitions

It has been remarked that some of our most exasperating controversies would cease at once if one of the disputants would take the time and have the courage to say precisely and briefly what he understands by the terms that are being used.

Is it not true that many an argument carried on face-to-face or by letter fizzles out when the parties get to know what each is talking about? So long as two people hold forth on the level of their own ideas and neglect to find out how these ideas mesh with the ideas of their opposition, just so long will they tire themselves out and wear down stenographers in futile disputation.

It isn't necessary to define everything, but only to define things that may not be clear to either party, and to draw pictures or plans when these will help both parties toward understanding.

Definition is not in itself a final argument. A definition is not true or false, except under the circumstances. An amusing example is given in C. J. Herrick's "The Thinking Machine": "If I define a man as a biped without feathers, then a plucked chicken is a man."

Definitions are useful starting points. They help us to avoid fruitless argument. They restrain unintellectual people from making themselves pests, and when we use definitions in our thinking they help us to keep on the right track.

Broad Vocabulary

The broader your vocabulary, the more deft you will be in expressing yourself in simple language, and the more readily you will pick up another's meaning without strain.

One does not need all the words in the language. Shakespeare used only twenty-five thousand, Milton was content with twelve thousand, and Chaucer had eight thousand: yet their plays and poems and stories live on as models of clear, picturesque writing.

Nor does one need great scholarship to give expression to what is in him. John Bunyan, whose only book of learning was the Bible, wrote "The Pilgrim's Progress," which to this day, though written in the 17th century, has been one of the most widely read books. There is no "fine writing" in Bunyan's work: it is in the plainest of language, fitting to its purpose.

Words change, and we need to revise our word-habits from time to time if we are to keep pace with life and custom. If language did not change, if words did not take on new meanings, if events did not compel us to coin new words, we should all be at the far end of a dead-end street. You could not explain Einstein's theories to a university class in Aristotelian Greek, or issue orders for the running of a mechanized factory in Cicero's Latin, or apply for a line of credit in Moliere's dramatic French. Words are instruments for the expression of current life-experiences, and vehicles for the communication of ideas.

Every word we use was at first a stroke of genius. Even the coldest, most matter-of-fact word of today was once a glowing metaphor. The words that seem odd to us because

they are new will some day, if they are useful words, become commonplace.

Rules for making and using words are not immutable natural laws, but simply conventions among educated people. There is an accepted standard of good language, and the fact that it is always changing in keeping with changing social forces is no reason for abandoning it. We have to keep looking over our shoulder at the past if we are to retain our sense of direction through the morass of slang, jargon, and the crude lingo of newspaper headlines.

Two examples will show how words change under the impact of widening knowledge or under the capriciousness of lax use. Take "atomic." It means literally "indivisible," but has now completely reversed its meaning. When we talk of atomic energy we are thinking of nuclear fission. Thus we have, as Joshua Whatmough points out in "Studies in Honour of Gilbert Norwood" (University of Toronto Press), turned a negative into a positive, almost as if "no" had come to mean "yes."

As an example of how language becomes disordered without any apparent reason, consider the word "fact," a word called "slippery" by James Bryant Conant, President of Harvard. It came from the Latin, where its meaning was "a thing done or performed," and that is its meaning in the Oxford Dictionary. But "fact" has become so vague that it is no longer trusted alone, and has to be guarded and supported by other words such as "true, actual, real, honest." In common use, a satirical person might say, my opinion is a fact, while your fact is a theory.

Words are Labels

Language is not knowledge, but merely a tool for learning. Words are not things, but labels we put on things for their ready identification.

In the early days, words themselves took on magic power: like "Open Sesame" swinging wide the door of Ali Baba's treasure cave. In those days the link between a word and the person or thing designated by it was a real and substantial bond.

Today, those who seek mature ways of thinking and writing and speaking are continually aware of the dangers we encounter in accepting the label for the thing, in using the same label for two different things or ideas, or in using different labels for things that are, in their essence, alike.

Some, seeking to teach young children, have adopted the plan of saying "we call this" as a prefix to telling the name of something: "we call this a pin, but that we call a button." A moment's thought will convince us that such a statement is much more correct than: "this is a pin and that is a button."

A word is not a thing, but the name of a thing. The marks we make on paper are not motors, machines, desks, employees, sadness, and happiness, but merely the names by which we know these things. The thoughts we put on paper by the use of words are not our beliefs, but footprints in the sand by which a reader may see the way our minds go. The clearer we make our words, the greater chance there is of the reader following our footsteps closely.

Utility justifies our way of writing and talking, imperfect though it

may be. We either label or remain ignorant. We must have names for things if we are to think of them. An essay in "The Language of Wisdom and Folly" (Harper and Brothers, New York) has this to say: "Can we be said to know what a pigeon is unless we know that it is a pigeon? . . . if we are not able to name it except vaguely as a 'bird,' we seem to be separated from it by an immense distance of ignorance."

There are more than two billion beings on this earth to whom we apply the word "man." They have great variety of complexion, features, age, habits and knowledge, but they have similarities that make the word "man" appropriate to all. It becomes important, if we are to segregate one person or a group of persons, that we speak and write with some particularity. We name the person, as "John Jones," or we name the group, as "Eskimos," or we differentiate in one way or another: by education, by religion, by profession, by ethical standards (good or bad). All these are useful, but we must keep in mind that they are only labels used for convenience; they must not be regarded as telling the truth, the whole truth, and nothing but the truth.

Style

One's style of putting words together should be one's own. As John Galsworthy, the English novelist, said in his foreword to W. H. Hudson's "Green Mansions": "To write well, even to write clearly, is a woundy business, long to learn, hard to learn, and no gift of the angels."

The writer's purpose, whether he is composing an immortal ode or the reply to a letter from a critical customer, is to convey an idea with the smallest possible obstacle to the flow of thought between mind and mind.

When we succeed in making ourselves clear, that is splendid, but most of us will wish to do better: we should like to make our meaning clear in a pleasing way; to bring a certain sort of sunshine into our writing. We cannot do that by using dingy words.

The value of a piece of gold jewellery is made up of two parts, the value of the gold and the value of the workmanship. Similarly, the worth of a piece of writing is made up of its intrinsic material — the thought — and the skill with which the words describing it are put together. The skill is not skill in copying. We shouldn't try to write like Churchill, but we are quite justified in trying to write as effectively as Churchill would write if he were doing our jobs.

Don't polish too highly. There comes a point beyond which additional sandpapering merely weakens your words and sentences. "The Pilgrim's Progress" is composed in the lowest style of English. If you were to polish it you would at once destroy its reality. For example, to "polish up" the extract from Bunyan's book that is sculptured on the altar in the memorial chamber in Canada's Parliament Buildings would ruin it: "so he passed over, and all the trumpets sounded for him on the other side."

Three Virtues

There are three qualities needed in words: accuracy, clarity and simplicity.

Having collected the best evidence to support what we are to write (for we cannot divorce accurate language from accurate

thought), then we must take care to clothe our ideas and images in precise words.

The second quality is a "must." The more clearly we write, though at the expense of a little time and some pains, the more easily and surely we will be understood. If we flow muddily, too careless or too lazy to spend the time and endure the labour of clarifying our stream of thoughts, we must not expect our readers to catch all our intended meanings.

The core of what we wish to say may be eaten out by use of abstract words. Even if we have a soft spot in our hearts for abstract nouns like fraternity, peace, prosperity, and goodwill, we have to bring our letters and our talk within the bounds of people who are interested in realities.

We must write within the word knowledge of our audience, if we are to make sure of being properly understood. Edgar Dale, writing in The News Letter, published by the Bureau of Educational Research of Ohio State University, tells an amusing illustrative story: "A little girl told her mother that the superintendent of the Sunday school said he would drop them into the furnace if they missed three Sundays in succession. He had said that he would them from the register."

To take pains to write simply may seem to be catering to the indolence of the reader at the expense of the fatigue of the writer. But if the writer wishes to convey ideas satisfactorily, what other choice has he? And if he doesn't wish to convey ideas correctly, why write?

If you must use a hard word, make your context illuminate it. In both business and private life we are bound to come upon circumstances in which a complexity must be dealt with. Then is when you specially need to search your memory, and perhaps a book of synonyms, for words to make your meaning clear.

Many persons will learn with surprise the result of an inquiry by the Florida Health Officers' Society into people's understanding of twenty words commonly used in health discussions.

Of the 100 persons questioned, only 46 knew the meaning of "citrus fruit," only 33 knew the word "nutrition," and the word "maternity" meant nothing more than a kind of dress to most of the women patients.

Be Specific and Concrete

To be specific is to take a big step toward being understood. Make your nouns and verbs tell precisely what you are talking about and what action you expect.

So long as we prefer generalizations and abstractions to concrete words which lie as close to things themselves as our minds can reach, we will remain, says Sir Arthur Quiller-Couch in his book, "On the Art of Writing," at the best, writers at secondhand.

Sometimes we have no choice, but when we must use an abstract word it is nearly always possible to clarify it in nearby concrete words. "Observe," says Quiller-Couch, "how, when Shakespeare has to use the abstract noun 'concealment,' on an instant it turns into a visible worm 'feeding' on the visible rose; how, having to use a second abstract word 'patience,' at once he solidifies it in tangible stone." (Twelfth Night II iv 112).

Self-examination will reveal whether a tendency to use abstrac-

tions is caused by careless diction or by timidity. The vagueness of abstract words is one of the reasons for their popularity. To express one's thoughts accurately is hard work, and to be precise is sometimes dangerous.

Sir Ernest Gowers remarks in his "ABC of Plain Words": "To resist this temptation, and to resolve to make your meaning plain to your reader even at the cost of some trouble to yourself, is more important than any other single thing if you would convert a flabby style into a crisp one."

On Being Workmanlike

Words are forceful or weak, judged by the accuracy with which they do their work. Not every occasion calls for a dynamic word. If you see too liberally words like vital, urgent, danger, crisis, disaster, fatal, grave and essential, they lose their force. Then you are tempted to put "very" in front of some, and to telescope others nonsensically, like "urgently and gravely essential." Find the strongest word warranted by the occasion, and let it stand on its feet without adjectival or adverbial support.

Anyone seeking to write clearly, accurately, and with a touch of grace will avoid the use of superfluous adjectives. It is a good habit to go over a piece of composition and challenge every adjective: make it declare its usefulness.

Some business people who have been successful in promoting sales have found that a plain statement, seeming to lack sophistication, laughed at by competitors for its simplicity, has done its work effectively.

When we move from business to private life for examples, we see how much better a simple, known, word is than one that has a more lordly air: how much more at ease we feel after getting a hearty welcome than after being granted a cordial reception; how much more comfortable we are with friendship, rather than with amity, with love rather than with charity: how much happier we are with happiness than with felicity.

The most important question we can ask ourselves about a word is this: is it doing the job as efficiently and as brightly as another word might do?

Our letters and reports need not be literary masterpieces, but they must be workmanlike. Let us write in keeping with our theme and purpose, finding the right word to convey the meaning that is in our minds, avoiding exaggeration and over-emphasis. Let us remember that words are only labels and that these labels must mean the same to our readers as to us. Let us tell ourselves every morning at the beginning of dictation time that the many-voiced monotony of business letters and reports is unnecessary.

INFORMATION REQUIRED

Major R. H. Mathams, M.C.
Australian Intelligence Corps

THE article "Atomic Training — Now" in the January, 1956, A.A.J. seems to unduly emphasize the defensive aspect of nuclear warfare.

Although disagreeing with the author's contention that atomic weapons are "just a normal development in the progress of weapons of war," I agree that we should all be giving a deal of thought to their effects on warfare and, more particularly, to our training for war. But don't let us get **too** "over-head-cover" minded.

If it is trite to say that the best method of defence is attack, it is nonetheless as "atomically" true as it ever was. If we suppose that the enemy is always prepared to hurl atomic projectiles at us, cannot we likewise assume that we will be able to do the same against him? Why should we train to fight with only our guard raised and with no offensive intent in our other hand!

The awful and absolute destruction effected by atomic weapons and the tremendous effect their efficient use can have on the course of battle make it imperative that our commanders know as quickly as possible:—

(a) When and where the enemy is preparing to use atomic weapons, and, **more important,**

(b) When and where our atomic weapons can be used to inflict the greatest damage on the enemy.

To achieve this, no new military arts are necessary, but a keener appreciation is required of the importance of military intelligence and good communications, and of the vital part front line troops play in acquiring information about the enemy. It has always been recognized that no plan is good unless based on good information, i.e., that which is accurate and timely, and in an atomic war our survival might well depend on the accuracy and timeliness of information delivered to the appropriate commander.

However, information will not always come to him who sits and waits. If the enemy adopts defensive measures similar to ours, we will have to go out and get the information we require, fight for it if necessary, and then use it quickly and certainly.

So I would suggest that, in individual training, the aggressive acquisition of information by all ranks

should be a major subject and that, in collective training, the "drill" of quickly passing information from front to rear should assiduously be practised.

As a corollary, our intelligence organization must be trained to operate quickly and accurately and our communications system be simple, flexible and highly efficient.

In summary, all will fail if the front line soldier does not aggressively go about one of his more important duties—the acquisition of information regarding the enemy. By all means let us adequately protect ourselves, but at the same time never lose sight of the soldier's prime function — to defeat the enemy. To defeat him we must hit him where the blow will be most effective, and we shall not know where that is till we go and find out!

COMPETITION FOR AUTHORS

The Board of Review has awarded first place and the prize of £5 for the best original article published in the March issue to "Pay and the Soldier," by Warrant Officer C. M. D. Flinn, Australian Army Education Corps.

Warrant Officer Flinn is at present serving on the staff of the Directorate of Army Education, Army Headquarters.

BOOK REVIEWS

DEFEAT INTO VICTORY. By Field-Marshal Sir William Slim, GCB, GCMG, GCVO, GBE, DSO, MC. (Cassell and Company Ltd., London.)

PROPHECY is dangerous, but this reviewer is prepared to state categorically that DEFEAT INTO VICTORY will rank for many years to come as one of the great military classics. It is neither a dry, coldly objective campaign study nor an imaginative tale. It is the vivid account of the war in Burma from 1942 to 1945, written by the man who forged and directed the weapon—the Fourteenth Army—which crushingly defeated the Japanese and drove them out of the country. The force and grace of the language employed make the book hard to put down once you have started to read.

Field-Marshal Slim begins his story at the point where he was appointed to command 1 Burma Corps in the darkest days of the retreat, when the Japanese tide of victory was flowing strongly at its flood. He recounts vividly the doubts and difficulties, the mental and physical anguish, of a defeated army forced into a long, nightmare retreat through dreadful country. But, shining through the tale of recurring disaster, is the steadfast determination to pull the army together, to overcome all difficulties, to return eventually to the offensive and destroy the enemy. Here, like a bright star on the darkest night, is the "will to victory," the warrior soul, which is the greatest single factor contributing to success in war.

DEFEAT INTO VICTORY is at once a frank personal account of the doubts, the hopes and fears, the difficulties and disappointments, the failures and triumphs of a commander, and a carefully balanced professional study of the Burma campaign. It is a story of military leadership at its best, of the dogged, relentless pursuit of the ultimate aim despite all distractions, despite anything that the enemy could do, and despite anything that the Allied Chiefs of Staff could not do for the Fourteenth Army. That Army literally pulled itself up by its own shoe strings, broke the legend of Japanese invincibility at the great battle on the Imphal plain, and then passing to the offensive, swept forward in rushing victory to the fulfilment of its aim

—the destruction of the enemy and the recovery of Burma.

Seldom has a modern army had to operate under such adverse conditions. When it turned to the offensive, ahead of it lay extraordinarily difficult country, mountains, jungles and swamps, great rivers and open plains, all practically devoid of communications. All this would have been formidable enough had supplies and equipment been forthcoming in adequate quantities. But the Fourteenth Army was low on the priority list. Undeterred, the Army set to with what it had, and in doing so established what must stand for a long time as a record of improvization. An improvization is another of the secrets of waging successful war.

Field-Marshal Slim concludes his book with a chapter on lessons learnt from the Burma campaign. Outstanding among these lessons is the overriding importance of morale and skilful, resolute leadership at all levels. And he debunks a lot of fancy ideas about special forces and special staffs which had currency during the war, and which, because of the element of glamour thrown around them, may still have a lingering appeal.

The Fourteenth Army developed a form of warfare, based more on human factors than on lavish equipment, which had as its chief characteristics:—

(a) The acceptance as normal of the regular movement and maintenance of standard formations by air.

(b) Great tactical freedom for subordinate commanders.

(c) The operation, over wide distances in most difficult country, of comparatively small forces in tactical independence but strategic combination.

(d) Reduced scales of transport and equipment, supplemented by ingenuity and improvization from local resources.

(e) The high quality of the individual soldier; his morale, toughness and discipline, his acceptance of hardship, and his ability to move on his own feet and look after himself.

In discussing the future Field-Marshal Slim says:—

"Modern war, with its destruction of bases, disruption of communications and disorganization of control, will, if they are to operate at all, compel armies to disperse.

"Dispersed fighting, whether the dispersal is caused by the terrain, the lack of supplies or by the weapons of the enemy, will have two main requirements—skilled and determined junior leaders and self-reliant, physically hard, well-disciplined troops. Success in future lang operations will depend on the immediate availability of such leaders and such soldiers, ready to operate in small, independent formations. They will have to be prepared to do without regular lines of communication, to guide themselves and to subsist largely on what the country offers. Unseen, unheard and unsuspected, they will converge on the enemy and, when they do reveal themselves in strength, they will be so close to him that he will be unable to atomize them without destroying himself. . . . The use of new weapons and technical devices can quickly

be taught; to develop hardihood, initiative, mutual confidence and stark leadership takes longer."

Whether you want to undertake an objective professional study of the art of war, or whether you want simply to read an exciting and most inspiring story, DEFEAT INTO VICTORY is the book you have been waiting for. No soldier, and, in view of our situation, particularly no Australian soldier, can afford to miss it.

—E.G.K.

RED SHADOW OVER MALAYA. By Brigadier M. C. A. Henniker, CBE. DSO, MC. (William Blackwood and Sons Ltd., Edinburgh and London.)

The author of this book commanded 63 Gurkha Infantry Brigade in Malaya from January 1952 to December 1954, and is therefore in an excellent position to give a first-hand account of operations against the Malayan communists. He does so in a very readable manner.

Brigadier Henniker "puts his readers into the picture" with a good account of the background to the emergency and the events leading up to it. He then develops his story of the operations during his tour of duty in the country with one eye on the higher direction and the other on the actual fighting. The result is a sense of completeness very often missing from personal narratives of this sort.

Brigadier Henniker gives detailed descriptions of numerous jungle encounters, and tells some good stories on the side. His ideas of the status and the "handling" of the armies sent overseas by the major Dominions in World Wars I and II are, perhaps, a little quaint.

The book is very well mapped and illustrated, and will be of particular interest to the Regular Army.

—E.G.K.

ECONOMY of PRINCIPLES

Captain P. Coakley,
Military Police Corps

TOO many eminent writers have already said all that could be said on the topic of the Principles of War that further comment seems trite. But in the spirit of that *deoch an dhorais* which never seems to be the last, the present writer is having his say, and keeping his fingers well crossed.

The main Principles of War have not altered very much with the passage of time, even though no one can deny that warfare itself has altered almost beyond recognition in the course of the past 50 years. There is a tendency, however, to keep on adding to the list, with the result that the number of recognized Principles now approximates to the round dozen, with all the indications pointing to further increases in the near future as the many manifestations of war itself increase and multiply. While it may not be easy to reduce the number of sound general Principles, should not the tendency be to keep the number static? Is there not the danger that the leader in war may lose himself in a maze of Principles and as a result fail to see the wood for the trees? Perhaps a few more questions may help to throw more light on the author's views.

If we include in our list of General Principles of War such a facet of operations as Administration, why exclude from the list Training, which is the essential preparation of troops for all phases of battle? On the other hand, a very important prerequisite for all preliminary planning for battle, namely Information (not military intelligence in its narrower meaning) has never been granted recognition as a Principle. Planning itself has not been recognized as one of the essentials for victory, according to some of the comprehensive lists of Principles seen recently. Would it be possible that those lists are not comprehensive enough, or, on the other hand, have their authors broken one of their own rules and meddled with details to the detriment of the essentials?

If by these few preliminary questions even a glimmer of doubt has been raised in any reader's mind as to the validity of the recognized Principles, and if by these questions some readers are driven to the detailed study once more of

—*From the Irish Defence Journal.*

the Principles of War to see what each entails, then some good has already been achieved. Nothing could be more fatal to progress or to the knowledge of the science of war than the blind acceptance of a list of Principles which mean so very little when not critically examined. So now read on and then rally around and champion the cause if it requires championing.

Leadership

The Selection and Maintenance of the Aim has long been recognized by all as the Master Principle of War. But is it in fact the most important Principle? Who is it that selects and maintains the aim? Who but the leader, be his status civilian or military. Is it not of paramount importance that this leader be the best there is? Brilliant, inspiring leadership is one of the first essentails in all affairs of State, and, after all, is not war—unfortunately still cropping up regularly every couple of decades or so—the most critical of all affairs of State?

You may say that the Head of the State decides the general aim in warfare, and that Principles of War should be concerned only with the active prosecution of war on the field of battle. But battles in the field are only one of the many facets of modern warfare. Very many battles must be waged apart from the clash of armies; more fronts than one are involved. But even for the troops in the field the leader is by far the most important single consideration. The general aim of the armed forces must be defined and maintained, and so likewise with the many subordinate aims through all the phases of operations in the field. In addition, men must be inspired to do and endure more than they believe possible. Who is to inspire this but the leader? This applies to all allotted authority in time of war, from the Head of State right down to the section commander in the field and the air raid warden on the home front. It is to these leaders we look for guidance and direction, and, in times of greatest stress, even for inspiration. Leadership, therefore, heads this short list of principles as the most important single influence in warfare.

Selection of the Aim

War has been defined as diplomacy by other means. In other words, its object is to enforce the national policy as economically as possible. Wars are planned by some nations, but to other they seem just to happen. Whether a war is a planned, aggressive one or an accidental, defensive one, there must be an aim, and the sooner this is defined for those actively engaged the better. The fixing of this aim is one of the most important steps in the actual prosecution of the war. The aim, when fixed, will be the one clear guide at all stages of the struggle itself, however long it may last. All planning must be designed for the furtherance of this aim, and any action taken which does not further the aim is purely a waste of effort and constitutes a breach of another recognised, if rather superfluous, principle, namely, Economy of Effort.

The General War Aim, as defined, should have within it, as well as the practical end, an element of one of those ideals which have done so much to inspire man since the beginning of history. The defeat

of an opposing nation or group of nations is a purely negative type of aim, and not likely to inspire men to great heights of achievement unless further appeals are made to such emotions as hatred and fear.

If we analyze the war aim of Britain in the last war, we find that, unless expediency brought about changes in the aim during the course of the long - drawn - out struggle, the original aim must have been simply the defeat of Germany. War was declared in 1939 by Britain to preserve the integrity of Poland. The aim at this stage could have been the preservation of existing sovereign states, which were in danger of being swallowed up by predatory neighbours such as Germany. It could also have been the restoration of the traditional balance of power in Europe, which a strong, expanding Germany had upset. What was the outcome of the conflict as far as these two possible aims were concerned? Not alone did Poland as a free nation no longer exist in 1945, but many other Eastern European States had likewise lost their freedom. What about the re-establishment of the balance of power in Europe? Never before was power in Europe so unbalanced as at the termination of World War II. Were it not for the restraining influence of American troops in Europe and the certainty of American intervention in any further conflict, the ill-effects of this unbalance would have been felt long before now.

The third possible aim of Britain, the defeat of Germany, was definitely achieved. But no sooner was it achieved than efforts were being made to reinstate defeated and divided Germany as an international power in Europe.

With regard to the USSR, it was obvious, long before the end of the war, that the defeat of Germany was by no means its ultimate in war aims. The manner in which the insurgent Polish nationalists in Warsaw were left to their fate, while powerful Russian armies marked time within easy reach, was but one of the many indications of wider plans and more far-sighted, if less laudable, policy. This was just one of the more obvious ways in which the real war aim was being maintained.

These instances are given to emphasize the importance of choosing at the outset the correct war aim. Leaders with vision are required for this purpose. Correct selection will render the equally important and more abiding task of maintaining the aim less difficult. Down through the various campaigns and operations and in other phases of the national war effort the need for leaders to maintain the general aim and to fulfil its particular requirements is consistently imperative. Our first two prerequisites for successful war, then, are brilliant, inspiring leadership and the correct selection and maintenance of the aim.

Information

The third main requirement is for full and accurate information for yourself and your troops. This goes hand in hand with permitting the enemy to gain none but deceptive information of what goes on within the confines of your territory. It is debatable whether this Principle should have been placed higher on

the list, as without this prerequisite how could it be possible for anyone, no matter how gifted, to select the correct aim and plan for its achievement?

Information in the wide sense means knowing the enemy and his intentions. It also, of course, implies knowing your own forces and their capabilities. The battle for information, in the international sphere, goes on in peace and in war. He who wins this battle in peacetime is certainly one jump ahead of any opponent at the outbreak of hostilities. But he will quickly lose this head-lead if his organization has not been properly geared for wartime conditions. His collecting agencies and his communications must be capable of standing up to the more than acid test of a long gruelling conflict under rules where no hold is barred.

It is not sufficient for the leader himself to be possessed of full information. The soldier in the ranks nowadays looks for the why and wherefore of things. "Their's not to reason why" no longer holds good for modern soldiers. If they know in a general way what the aim of a particular operation is and how their part fits in with that general aim men are much more likely to give of their best.

Information is a double-edged weapon which can easily do injury to the wielder. In war the objective should be to have as complete a flow of information as possible among our own troops and people generally, while at the same time allowing the enemy to learn only that which is intended to deceive. It is by no means easy to comply with these somewhat conflicting requirements, but good screening and proper tuition of troops and civilians alike should do much to prevent harmful leakages.

Organization

Modern warfare is fast approaching totality in its manifestations. It is fought as much on the home front as in the battlefield. In the old days it was sufficient to raise, equip, train and supply better armies than your opponent in order to win wars. This is not nearly enough today. Armies are defeated, not at the fighting front only but in the homes and the factories and the fields. The type of organization needed for the prosecution of a war is now much more complex and much harder to define. But what is certain is that he who best organizes his forces—soldiers and civilians alike—each unit well fitted for the tasks it is expected to perform, is already well on the road to victory.

The task of organizing for war does not commence after the first shots are fired. It behoves every nation to take certain steps at all times to ensure preparedness in the event of war. These steps of themselves may have the happy result of averting a conflict. But it requires exceptional vision to organize and train forces for the next war, the shape of which can be but vaguely visualized. Weapons are always changing; new ones are being invented and old ones are improved and put to better use. At the present time the shadows of chemical, biological and atomic war loom like dark clouds over the entire world. Now more than ever the possible course of World War

III is difficult to foresee. Who could correctly forecast the type of organization required to ensure victory in such circumstances? Truly, leadership of an exceptional order is required to prepare for and preferably prevent such a catastrophe as a future total war would represent.

But in the purely objective and scientific view of warfare, surely the fourth great requirement for success is the building up, equipping, training and supply of the proper organization to achieve the aim in all phases of the struggle. Once again it may be argued that the sequence is wrong; that perhaps your existing organization at the outbreak of war would largely determine your war aim; that you may have cut your cloth to suit your measure, as it were. This would entail placing organization *ahead of the aim in the list of principles.* Experience has shown, however, that most work on the shaping of an organization for war takes place *after war has begun* and not before. The selected sequence therefore indicates that the aim remains the guiding factor over those other principles that follow.

It is intended to include under this general heading of "Organization" all the various activities which go to the making of efficient units or teams suited for their purpose. These include the equipping, training and supply of these units. It is also intended to cover civilian as well as military organizations, including those for the production of war materials and those set aside for Civil Defence.

Any organization that has not unity of leadership is apt to fall far short of 100% in efficiency of performance. In present-day Defence Forces *there is a growing tendency* to segregate components into watertight compartments, each with its independent commander or leader, who is usually very jealous of his rights as such. First of all, we have the Army, Air Force and Navy segregation, each with its own separate command. Within armies themselves we have the various corps and services, each drawing daily closer into its own particular shell. So far has this tendency progressed that it has even been necessary to enunciate a special Principle to reverse the trend. Co-operation is the keyword for this principle. Were Leadership and Organization themselves even partly effective there should be no need to appeal for co-operation among sub-units of any organization.

Isn't it rather obvious that the infantryman in the front line, the gunner in the gun lines and the airman bombing and strafing the enemy lines are all engaged in the same common practice of hurling missiles and high explosives at the *enemy, and hoping they* hit him where they will do him most harm? The only difference is mainly one of range. What is the difference between the marine *fighting on* land and the infantryman doing likewise? Isn't it mainly one of method of transportation? The infantry who landed on the Normandy beaches could truly lay claim to the title of marines since they crossed the sea in ships like true sailors, many even without making use of their nose-bags.

If a unit is organized for a par-

ticular task, it should be equipped with all the men, arms and tools required for the accomplishment of the task. If components of Army, Navy or Air Force have to combine for a particular job, the Task Force, as it is appropriately called, should be a unit for the purpose of command with one commander, whether he be an experienced admiral or an equally experienced high ranking army or air force officer. His subordinates should have powers only of advice insofar as the general planning and execution of the operation are concerned. Time at present spent in endeavouring to ensure co-operation and in resolving difficulties between temperamental commanders could be more profitably directed to getting on with the job. Here is where true leadership can be distinguished from even the best imitation.

Planning

As in the case of Organization, quite a few of the recognized Principles could be herded under this heading. Security, Flexibility, Co-operation and Economy of Effort are all implied in the process of Planning, but over and above all this is the primary requisite of Information. A sound plan, based on adequate and accurate information —not forgetting the unexpected—is the sure foundation of success. In this case, too, we have to depend on our old friend, the leader, whose task it is to formulate the plan. It is submitted, therefore, that the Principles listed above belong more properly to the mechanics of Planning, for which, if any general Principle could be applied it might possibly be *expect the unexpected and do the unexpected to achieve your aim.*

A sound plan, which, in this case, must be based on the capabilities of the unit or units available, guarantees the prospects of success. It is not the intention here to go further into the details of planning, but a good knowledge of the administrative implications of the proposed line of action is an important requisite for him who formulates the plan. But because of this, to raise Administration to the status of a Principle of War seems rather far-fetched.

Execution

Speedy and vigorous execution of a plan well made is, of course, the final and most important step in all operations of war. Another generally accepted Principle of War gives the key to victory as "Offensive Action." A Principle to be effective should be capable of standing on its own feet, so to speak. But the strict adherence to this principle could quickly lead to difficulties. Napoleon at Moscow and Von Paulus at Stalingrad would have much to say about this. On the other hand, the Finns in their heroic fight against the USSR did not have resort to any great extent to the offensive. Yet who could say their strategy was not good? It is a definite moral victory as well as a physical one to advance your front into enemy territory, but there is always the danger that the enemy is deliberately choosing his ground for the really decisive battles. Commanders who have relied largely on offensive action have been exceptionally successful, but others, who placed emphasis on security, have been equally so.

There is apparently still a place for either a Montgomery or a Patton in the top flight of leaders, no matter how they may differ in their approach to the Principles of War.

Principles of War

The list of Principles placed in the order considered now reads:

(i) Brilliant, inspiring leadership at all levels.
(ii) Correct selection and maintenance of the aim.
(iii) Full, accurate information; none but deceptive information for the enemy.
(iv) Carefully planned, adequate organization.
(v) Sound, forward planning of operations.
(vi) Speedy, vigorous execution of plans.

What about the order of importance of these Principles? It is true that the Aim is the most important factor in all those four Principles which appear below on this list. It is true that the Aim may even influence the selection of leaders. But, taken in all, it is considered that Leadership is *the* most important single factor in war. An outstanding leader can do much for a bad Aim, but however good the Aim, it can do but little for him who lacks the qualities of Leadership.

Recognized Principles

Perhaps the author should begin to examine his conscience when, at a first glance, he finds only one of a current list of no less than ten Principles of War included above. Apart from those already mentioned, why have *Maintenance of Morale, Concentration of Force* and *Surprise* been discarded. Morale is so important that we cannot afford to ignore it in any consideration of factors likely to influence battles. But has it really been ignored in compounding the list above or has it in fact been given greater emphasis?

Man is still the principal ingredient, even in this machine age, for any organization for war. Man is but a poor judge of himself and his own capabilities. He is capable of doing and enduring much more than even he himself realizes. Morale is that condition under which achievement is known to flourish and reach its greatest heights. High morale is the result of quite a number of influences, not least of which is the belief that he who leads and directs is the best there is available. Next comes the knowledge that what a man is called on to do is the correct thing, and is designed to further the main aim, which itself is a good and desirable end. Good organization, which in turn connotes good equipment, training and administration, is another great aid to morale. Lastly, "nothing succeeds like success," so previous good execution gives pride in oneself and in one's unit, and leads to even greater effort. In short, if the six Principles already enumerated are followed, high morale will result. He who wishes to boost morale could do no better than to concentrate on the Principles enumerated, and morale will definitely not be the loser.

With regard to Concentration of Force, all Principles of War could, on a final analysis, be boiled down to this one injunction, "Be superior to the enemy." This may be an

over-simplification, but nobody could deny that it contains the key to ultimate success. If the *immediate aim* of any operation is properly selected and maintained, it should scarcely be necessary to point out that you *must* have the forces readily available if you expect to succeed in your aim. Good Organization and Planning should take care of the rest.

With regard to the narrower interpretation of this long-established Principle, it is noted that present-day teaching on the technique of attack still specifies that the break-in will be carried out on a narrow front. This could scarcely be termed realistic in the light of the mass-destruction weapons in the hands of an opposing foe. It is more likely that the attack in future will revert more to infiltration tactics over a wide sector of the front to avoid presenting attractive targets for atomic weapons. Could you imagine the result were the Germans at Sedan or the Allies at Salerno, Anzio or even Normandy subjected to atomic bombardment? Concentration will, of course, continue to be necessary to effect local superiority, but not in the present accepted sense of the term.

Surprise, too, has not been ignored in the condensed list of Principles. It will be noted that more emphasis is laid on obtaining information of the enemy's plans and on deceiving him as to your own *real intentions*. These conditions are the best foundations for taking the enemy by surprise in all operations. If good information is teamed up with good planning — which should include a deception plan — surprise will be the natural result.

Conclusion

It will be argued that each of the long list of recognized Principles has been in the crucible of war and has stood up to all its rigorous poundings. On the other hand, it has already been pointed out that many successful leaders did lay more emphasis on one principle to the neglect of one or two others without apparent ill-effect. On the other hand, if an inspiring leader fails badly in applying any of the six principles now listed, his progress to the top flight will definitely be retarded.

One of the recognized principles is Economy of Effort. Would it not be as well to start with Economy of Principles? It is rather obvious that many of these Principles were added to the list as a result of some major default by some leader in applying one or other of the six general Principles now listed. If we go chasing after Morale, Concentration, Administration and Co-operation we may lose sight of our Leadership, our Aim, our Information, our Organisation and our Plan. In fact, we may even forget to hit the enemy hard where he least expects to be hit, and thus neglect our "Speedy, Vigorous Execution of the Plan."