AUSTRALIAN ARMY JOURNAL

No. 42 NOVEMBER, 1952

Notified in AAO's for 30th November, 1951.

MILITARY BOARD

Army Headquarters,
Melbourne.

1/11/52

Issued by Command of the Military Board

Secretary to the Board

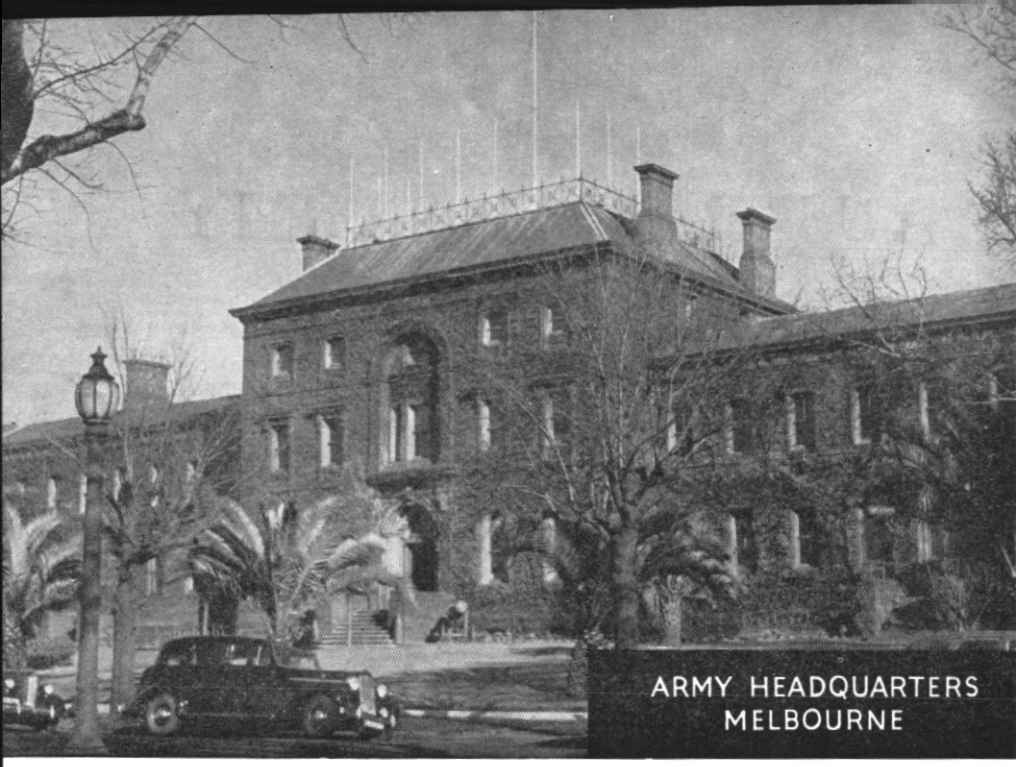
Distribution:
One per Officer and Cadet Officer.

AUSTRALIAN ARMY JOURNAL

A Periodical Review of Military Literature

Number 42 November, 1952

CONTENTS



ARMY HEADQUARTERS
MELBOURNE

AUSTRALIAN ARMY JOURNAL

Editor:
COLONEL E. G. KEOGH, ED (RL).

Staff Artist:
MR. CYRIL ROSS.

The AUSTRALIAN ARMY JOURNAL is printed and published for the Directorate of Military Training by Wilke & Co. Ltd. The contents are derived from various acknowledged official and unofficial sources and do not necessarily represent General Staff Policy.

Contributions, which should be addressed to the Director of Military Training, Army Headquarters, Melbourne, are invited from all ranks of the Army, Cadet Corps, and Reserve of Officers.

THE
NORTH ATLANTIC TREATY

George L. Walker, Esq.
Directorate of Operations and Plans,
A.H.Q.

The Treaty.

The North Atlantic Treaty was signed in Washington on 4th April, 1949, the signatories then being Belgium, Denmark, Canada, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom and the U.S.A. Greece and Turkey were admitted at a later date.

The parties to the treaty reaffirmed their faith in the principles of the U.N. Charter and their desire to live in peace with all peoples and governments, to safeguard their common heritage and civilisation, founded on the principles of democracy, individual liberty and the rule of law. The treaty consisted of 14 Articles, which set out in wide and general language the intentions of the high contracting parties. By virtue of Article 1 the parties undertake to settle any international disputes by peaceful means and to refrain in their international relations from the threat or use of force in any manner inconsistent with the purposes of the U.N. Charter.

Peaceful and friendly international relations are to be developed by strengthening their free institutions, and by promoting conditions of stability and well-being. Economic collaboration between all or any of them is to be encouraged. The parties separately and jointly by means of continuous and effective self-help and mutual aid, will maintain and develop their individual and collective capacity to resist armed attack — Article 3. The parties are to consult together to safeguard their security, territorial integrity and political independence.

An armed attack against one or more of the signatories is to be considered as an attack against them all, and if such an attack occurs each of them will assist the other or others so attacked by way of individual or concerted action as it may deem necessary, including the use of armed force. Any action taken must be reported immediately to the Security Council. An armed attack includes an attack on territory of any of the member states, on the Algerian Departments of

France, on the occupation forces of any party in Europe, on the islands under the jurisdiction of a party in the North Atlantic Area north of the Tropic of Cancer or on the vessels or aircraft in this area or any of the parties.

The treaty is not be interpreted as affecting the rights or duties of any of the parties under the UN Charter. No party is to enter into other international agreements which conflict with the provisions of the North Atlantic Treaty. A Council is also established to represent each party in its implementation of the Treaty, and such Council is the organ with the necessary power to set up a Defence Committee. The parties may also invite any other European State to contribute to the Security of the North Atlantic Area, and to accede to the Treaty. The Treaty must be ratified and its provisions carried out by the parties in accordance with their respective constitutional processes.—Article II. After the Treaty has been in force for ten years the parties may consult together for its review, and after twenty years any party may cease to be a member after notice of denunciation. — Article 13. Article 13 must be considered in conjunction with the rule of international law known as the "rebus sic stantibus" rule, whereby a nation may withdraw from a Treaty when the conditions on which the Treaty is based no longer exist. As to when such conditions no longer exist is usually decided by the State wishing to withdraw. Due to this rule treaties only have the force of the international law based on co-operation and the moral principle of honouring an obligation. There can, of course, be no other sanction stronger than this because international society has no super state or sovereign to answer to — the United Nations has not sufficient powers yet to force a sovereign state to abide by a treaty.

Legal Problems.

In the House of Commons, on May 12, 1949, and in the US Senate, on July 11, 1949, the legality of the North Atlantic Treaty was questioned. Senator Taft, in the United States, thought that under Article 3 of the Treaty the US would be committed to a military assistance programme in arming the nations of Western Europe. The Senate Committee on Foreign Relations at page 24 of their report, however, pointed out that in their opinion the correct interpretation was that Article 3 did not bind the US to accept the proposed military assistance programme, or for that matter any kind of programme, but it did bind the US government, as well as the other signatory governments to the general principle of self-help and mutual aid. As to what is self-help and mutual aid will depend upon the opinion of each signatory State.

Mr. K. Zilliacus, in the House of Commons, argued that Article 53 of the UN Charter imposed an obligation on the signatories of regional agreements not to take collective action in self defence before the Security Council had decided what measures it will take. Mr. Noel-Baker replied that NATO was not a regional agreement within the meaning of Ch. VIII of the UN Charter, and secondly that Article 53 does not take away the right of collective defence under Article 51 for members of the regional agreement.

Status of Forces of Parties to the Treaty.

Command Paper 8279 of 19 June, 1951, sets out the agreement regarding the status of forces. The detailed provisions of this paper lay down rules to be observed, e.g., sending State to respect the law of the receiving State, exemptions from passports and visas, recognition of driving licences of sending State, and wearing of uniform, carrying of arms and numerous rules and principles in regard to civil, criminal and military jurisdiction. Claims for damages to the State, contractual claims and rules for procedure governing these matters are also laid down. Taxation, customs and foreign exchange are referred to in Articles XIV. Differences between the contracting parties are to be settled by negotiation, and differences which cannot be settled by these means shall be referred to the North Atlantic Council.

Higher Military Direction of NATO.

The military organisation is divided into two main parts—firstly, the Higher Military Direction, and, secondly, the System of Military Command. The Higher Military Direction is vested in three committees, the Defence Committee, the Military Committee and the Standing Group, and the Military Representatives Committee.

The Defence Committee consists of the defence ministers of the Twelve Powers. Three formal meetings are held yearly, usually in a different nation each time. Ministerial authority and powers are also exercised at other times as the Chiefs of Staff are constantly submitting problems to individual ministers. The chairman of the Defence Committee is selected from time to time from one of various members of the committee.

The Military Committee and the Standing Group consists of the Chiefs of Staff of the Twelve Powers. This is the supreme military authority in NATO. Meetings of the Military Committee usually precede a meeting of the Defence Committee. As the Military Committee meets only periodically, the Standing Group was formed with HQ in Washington to act as an agent of the Military Committee. It consists of the Chiefs of Staff of France, US and the UK. The value of the Standing Group is that it can give quick decisions on military matters as they arise. The Standing Group is also responsible for higher strategic direction. The Standing Group has a staff of international working teams, consisting of service officers of France, US and the UK.

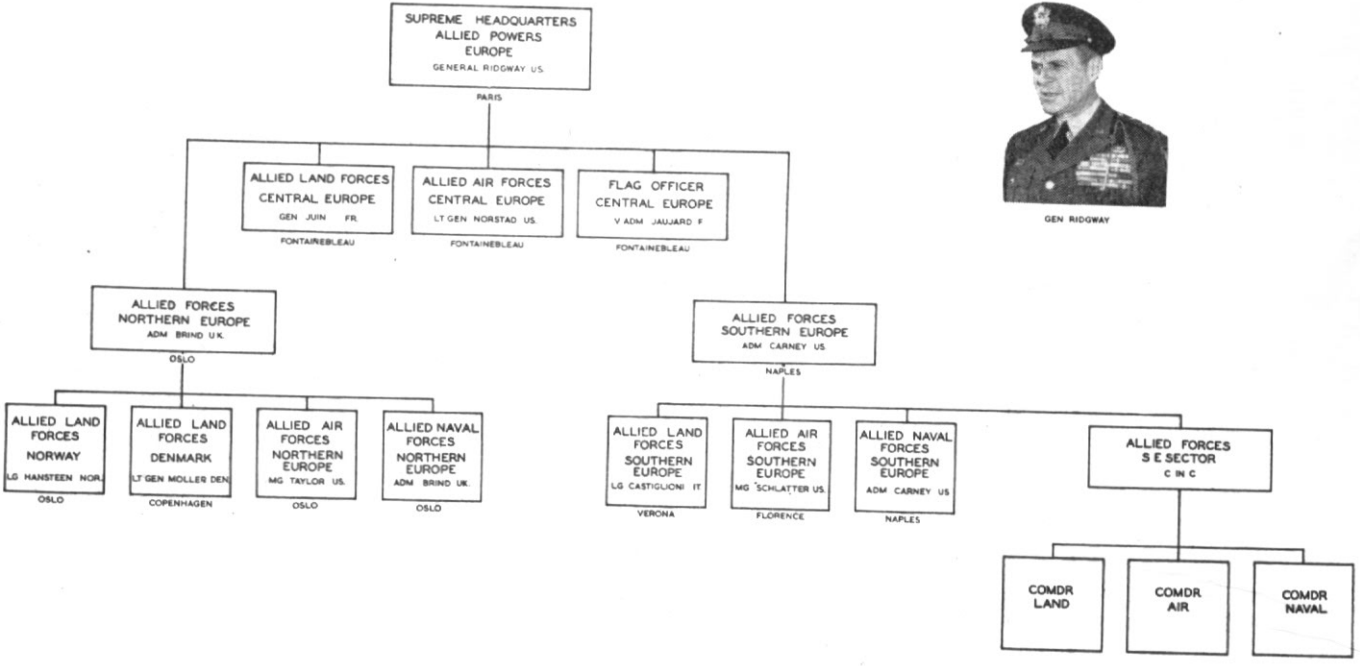
The third organ is the Military Representatives' Committee, designed to ensure that the views of the countries which are not members of the Standing Group should be represented. This body represents the Chiefs of Staff of all the NATO powers at Washington. It works in close liaison with the Standing Group.

System of Military Command.

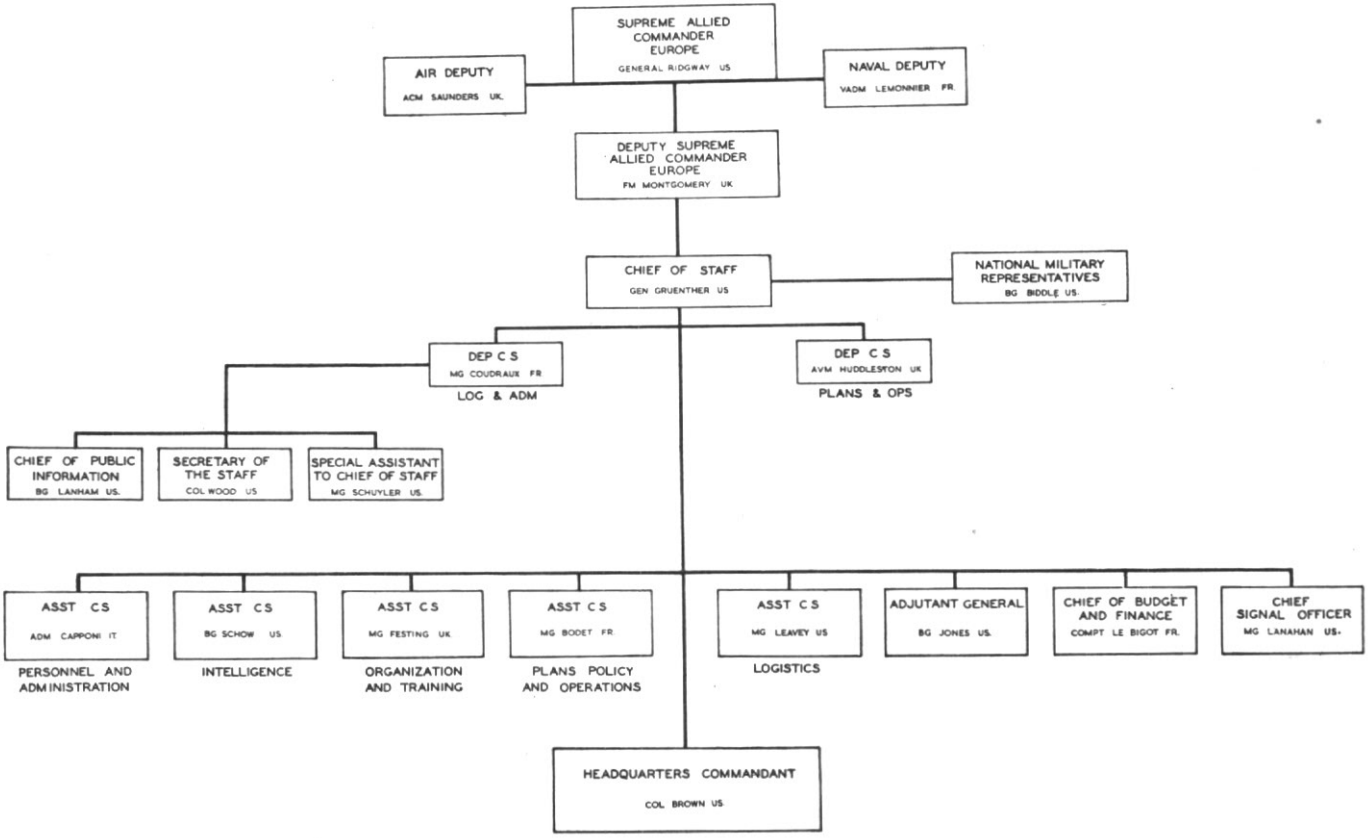
The Command Organisation was developed to train the forces of the various powers and to direct military operations should they arise. The Supreme Headquarters Allied Powers in Europe (S.H.A.P.E.) was set up and General Dwight D. Eisenhower was appointed First Supreme Allied Commander Europe. He was succeeded by General Ridgeway early in 1952. General Eisenhower was responsible for

NATO — ALLIED COMMAND

GEN RIDGWAY



SUPREME HEADQUARTERS



the defence of the allied countries of Europe and in war he would command all land, sea, and air operations to this end. His peace-time functions are organisation of training, preparation of defence plans, and making recommendations to the Standing Group on military questions. The Supreme Commander receives his directions from the Standing Group, but he also has direct access to the Chiefs of Staff of any of the Twelve Powers, and even in some circumstances to the Defence Ministers and Heads of Governments. The Supreme Commander also has three deputies — army, navy and air. The army and air representatives are British and the navy is represented by France. All the NATO countries maintain military liaison officers at S.H.A.P.E.

The Supreme Command is divided into three sectors—Central, Northern and Southern. Since Greece and Turkey became members of NATO, a fourth Sector has been added, known as the South-Eastern Sector. There is one C-in-C in each Sector, and under him a Commander (Land), Commander (Air) and a Flag Officer. These appointments are held by senior officers of the forces of the signatory States. Within S.H.A.P.E. itself there is a Chief of Staff and three Deputy Chiefs of Staff to deal with plans, policy, operations, administration and national affairs. There are also five Assistant Chiefs of Staff, who deal with Plans and Operations, Intelligence, Organisation and Training, Logistics and personnel and administration.

The Supreme Allied Commander Atlantic (S.A.C.A.) has been considered by the Defence Committee, and he is to be an American officer with a British Deputy. The Atlantic Command will be divided into two areas — Eastern and Western. The reason for the appointment of an Atlantic Commander is due to the threat by the submarine and the necessity for a flexible system of defence to counteract it. An American officer was favoured because the resources of the US Navy are far greater than those of the UK.

Conclusions.

NATO is a new idea and organization without precedence in the world's history. In peace-time it is a great step forward in planning and co-operation for the preservation of peace and the defence of the western world. The countries which are members are all in much the same geographical area. They realize that in unity they have greater strength against an aggressor nation.

Lord Alexander stated on 28th April, 1952, over the BBC, that the fate of the UK is bound up with that of Europe. He said: "In a sense we are a European country, but even more are we an Atlantic country. It is therefore as a member of NATO that we play our part in the defence of Western Europe."

Behind Red China's
HUMAN SEA TACTICS

Hsu Kai-yu.

Clever propaganda is turning the non-political Chinese peasant into a fanatical revolutionary. The weapons are "speak bitterness" sessions, "complaint and revenge" education, publicly proclaimed self-criticism, and "battle challenges."

Hsu Kai-yu is an assistant editor of the "Chinese World," an English-Chinese bi-lingual daily published in San Francisco. During the Second World War he was a captain in the Chinese Nationalist Army.—Editor.

THE U.S. 7th Division advanced virtually unopposed toward the Manchuria-North Korea border on 20 November, 1950. Two days later its patrols were gazing across the Yalu River. When more troops came in, the area could be "cleaned up" and the Korean war would be over.

The next day enemy reinforcements began to pour in. On 23 November parts of the Yalu line began to feel the pressure. On 27 November, the 7th Division withdrew under crushing enemy attack.

"We didn't see them until their heads popped up in the darkness," said Private First Class Charles G. Schiffler of the 2nd Division on 30 November. "When we got out, I counted only fifteen survivors in my company."

The following month saw a series of nightmares for the United Nations forces, including the 20,000-man U.S. 1st Marine Division trapped behind

—From "Combat Forces," U.S.A.

enemy lines for thirteen days and other combat teams momentarily scattered and lost all along the 100-mile front.

As Major General Oliver P. Smith led his Marines to "attack in a different direction"—toward the Hungnam beachhead—hordes of Communist troops threw themselves at the American spearhead of tanks. U.S. machine guns on the ground and in the air mowed down wave after wave of Chinese in "screaming banzai charges"—as the newspapers described it. Still the Reds kept coming up.

Private Schiffler's experience was shared by many other American soldiers. A 7th Division regiment was caught in a mountain pass six miles south of Kapson when "suddenly all hell broke loose" and out of the North Korean mountains came surging Reds whose number matched the rounds of rifle ammunition carried by the regiment.

How savagely these Reds attacked was seen through the eyes of William Chapman of the United Press. "Even wounded Reds refused to quit," he wrote. "I saw one Communist soldier begin to smoulder from fire, but he still held his rifle."

When the Chinese Communist impact on the war front finally spent itself, and the United Nations troops stabilised their positions, the Allied command sought answers to the question: What made these underfed, poorly equipped Reds so fanatic in attack?

Some soldiers recalled stories of Chinese Communist "human sea" tactics, and word was quickly passed around that this was it.

It is probably inaccurate to say the Chinese Communists invented this form of assault, although they were among the first to use the term "human sea." You can find instances in China's military history of offensives executed by sheer weight of numbers. The revered Chinese strategist Sun Wu-tze in 550 A.D. wrote: ". . . in turning the tide of the war, nothing can take the place of a numerically overwhelming army, embittered about their past defeat and determined to fight back."

Armies of the Republic of China have been trained by German, Russian, Japanese and finally American methods in the past 35 years. But a vein of military thinking along the lines set by Sun Wu-tze persisted and prevailed. During the civil war commanders often ordered their troops to attack en masse with or without being "embittered about their past defeats and determined to fight back."

The Nationalist Chinese armies to a certain extent retained the same obsession for "mass attack" when they grappled with the Reds after World War II.

"Behind a general's glory lie thousands of bleak bones" is a classic Chinese expression but it does not reflect on the general who wins the glorious war with thousands of bleak bones. A Chinese general dreads retreat more than he does death, because death plus humiliation usually awaits him when he retreats.

In April of 1944, an American colonel conferred with Nationalist Chinese General Kwan Lin-jen in Wenshan, southern Yunnan Province, on the defence of that region against the Japanese in Indo-China. The colonel was helping the general

train his troops. A report arrived at their conference table saying that 6,000 pounds of TNT had been used to blast a Japanese outpost in western Yunnan before the Chinese Eighth Army captured it, and that the Chinese had lost a whole regiment in four unsuccessful frontal attacks.

The colonel said that TNT should have been used at the beginning to save those troops. Casually disagreeing with the American, General Kwan remarked that perhaps the Eighth Army had failed to send enough men to do the job.

U.S. officers training the Nationalist troops in China found it difficult to persuade Chinese commanders to avoid frontal attacks with poorly equipped troops. When battles were joined and the commanders became incensed at the enemy, they would order company after company into the engagement. Appalled and puzzled, the Americans nevertheless had to admit that "that was quite a bit of guts." In time they came to understand how hard it is for commanders to unlearn early lessons.

While the Nationalist mass attack had all the physical features of a human sea offensive, it fell short in psychological preparation. True, there were "political workers" assigned to every division. They painted slogans on the soldiers' barracks, arranged recreation programmes, and gave occasional pep talks, but the soldiers, either fresh from the farm or torn and worn as they graduated through civil wars, were not mentally prepared to fight. This was indisputably proven by the rapid collapse of Nationalist troops on the Chinese mainland.

Have the Reds remedied the psychological weakness of Chinese troops? A few on-the-spot observations seem to indicate an affirmative answer.

The Reds first demonstrated their emphasis on psychological training in the early 1930s. In 1935, a hurriedly gathered army of 80,000 men under Red Generals Ho Lung, Peng Teh-hwei, Hsiao Ke and others was marching north from Southeast China with Nationalist troops in hot pursuit. In every village the Red army entered, Communist political commissars talked many young villagers into joining the "Young Vanguards' Corps." Travellers caught in the Red army's path later said they were impressed by the discipline of the Corps and the speed with which the Reds indoctrinated the youngsters.

The Young Vanguards' Corps consisted of boys between ten and fifteen years of age. They were taught to perform duties which were difficult for grown men. They went ahead of the main body of the army to gather intelligence, spy on the villagers and generally open up the way for the army. Members took pride in performing their duties and in the fact that they belonged to the YVC. One merchant, taken by the Red army from Kiangsi Province to Hunan Province, came across a 13-year-old corps member at the city of Hsiangtang. He was amazed at the lad's command of Communist Party dogma in which the young boy so fanatically believed and by which he was motivated. The Communists' success in completing the march to Yenan in Shansi Province, North China, was largely due to the work of this corps of boys.

The fleeing Red army had only short breathing spells at each vil-

lage. Yet after it left, young men were heard freely tossing Communist phrases about. They spoke glibly of "liberation," "equality," and "class struggle," so much so that the Nationalist troops, on the trail of the Reds, identified them as Communists and executed them.

It was in Shansi Province that the Reds buckled down to the task of building the core of the future Communist China's military might —the Eighth Route Army. How much emphasis was placed by the Reds on the political indoctrination of their soldiers was seen through the establishment of Kang Da (Resistance University) and Shanpei (North Shansi) High School, where seventy per cent. of the curriculum were political training courses, and military subjects amounted to only thirty per cent. Upon graduation each student was a "finished Communist Party cadreman" (Reds call a well trained party member a "cadre"), capable of serving as an officer in the army, or an administrator in a village government, or leading a guerilla group.

Just how do the Communists apply their political indoctrination to warfare and make ordinary human beings willing to sacrifice their lives in fanatic attacks? Some have said that the Reds rely on machine guns manned by political commissars to keep the soldiers marching forward. This is what Nationalist troops did in civil war battles where front-line commanders depended on machine guns to keep their own soldiers from retreating. If the human sea attack were really so simple, then the Chinese Nationalists, having far more men under their command than the Reds in 1946-47, should have dealt Mao Tse-tung a death blow. The fact is to the contrary. The numerically inferior Reds used human sea tactics to smash the Nationalists.

The Communist soldiers do not fight with machine-gun-toting political commissars behind their backs. Before they go to the front, they have already seen enough of the commissars. When the fighting begins they may see more political workers among them, but these comrades are carrying notebooks, not guns.

From the time of his enlistment to the day he goes into combat, there is not a single day that a political worker does not take up the main part of a Communist recruit's time.

Communist political workers are responsible for making loyal Red soldiers out of illiterate farmers, frightened merchants, sometimes cynical white-collar workers, and apathetic ex-Nationalist officials. Their tools include: "Complaint and revenge" education to point out who is the enemy; "self-criticism and mutual criticism" meetings to establish and strengthen the soldiers' allegiance to the party; a "model revolutionary" movement to induce the soldier to compete for the victory in battle; "critique" sessions after each engagement to examine the faults and appraise the success, rejuvenating the soldier's morale and preparing him for the next engagement.

With these tools, the Communist political workers literally hammer out soldiers who will always "volunteer" to take the most dangerous enemy position. These are the raw materials of a human sea offensive.

In the training camp, which is located wherever veteran Commu-

nist troops are stationed and which is not necessarily a permanent camp, "complaint and revenge" education takes precedence over combat training. The theory is that the recruit can pick up enough knowledge about a rifle or hand grenade through his contact with veteran soldiers, once he is mentally prepared.

A "complaint" or "speak-bitterness" meeting is designed to arouse the recruit, and encourage him to talk about his grievances from his grandfather's time to his own. Under the Communist cadre's questioning and prodding, the recruit, if he is from a farm, is urged to describe how he has slaved on the land without getting anywhere; or how he was mistreated by his superiors if he is an ex-Nationalist soldier; or how his home was destroyed by civil wars, or by the Japanese. The Communist cadre knows how to convince the recruit that his suffering was brought about by the Nationalist or American "imperialists," and that even flood or drought was due to the misrule of the old regime.

Most of the recruits are simple, honest farmers who readily follow the prompting of the cadre to tell everything. Often they are touched by their own stories of the sad life of their parents and relatives. When the climax of the "complaint and revenge" meeting is reached, the cadre produces ready-made pledges and urges the recruits to sign them in order to avenge their grievances.

The pledges carry such statements as "I am willing to give my life to Chairman Mao in order to kill our enemy—the American Imperialists .. ." Later when the Reds are organising a human sea attack, these pledges are used to call up the signers. Meanwhile the cadre continues to remind the recruits that they have signed their pledges, that they must live up to their promises, and that to do otherwise would be "reactionary."

Nobody wants to be a reactionary in Red China these days, hence the increasing number of pledges and the continuous flow of material for the human sea tactics.

Daily "self-criticism" and "mutual help" meetings follow the initial complaint meetings to keep the recruits reminded of what they have been told and what they have said themselves. Before a recruit begins seriously to doubt the meaning of the "pledge" he signed, a self-criticism meeting demands him to be frank about his "deviationist" thinking and then the Communist cadre gives him another prodding to get back on the Red line. If he doesn't tell his thoughts, comrades who suspect him of wavering call on him to correct his thoughts at a "mutual help" meeting.

At these meetings, the recruit is urged to become a "model revolutionary." To become a model in the Red army involves abiding by numerous commandments. He must be one hundred per cent. loyal to the "people." He must accomplish his mission regardless of difficulty. He must absolutely obey the "organisation" (which is the army which, in turn, is the Communist Party). He must enthusiastically help his comrades and fearlessly criticise himself. There is a long list of does and don'ts. To prepare for a human sea offensive is mainly psychological indoctrination.

When the time to organise a human sea attack comes, names of the

pledge signers are called and their comrades give them a roaring send-off. In high spirits, the selected soldiers march off to the advance area. The commander briefs them on the enemy situation and instructs them to hold small group discussions. There are inflammatory discussions of "American aggression," and the "threat to our motherland." When the excited soldiers begin to shout angry war cries, the cadres suggest that each unit "volunteer" for the assignments. One company may volunteer to take the most difficult enemy strong point in the impending attack. A soldier may swear that he must capture two American soldiers before he quits for the day. A third team may declare that it will carry dynamite to blast the enemy-held hill, and that none of the members of the team will retire even if wounded twice.

Thus is a human sea attack shaped up.

Next is the drive to "establish merit" or "glory." The party through the army has already manufactured titles like "combat hero," "great merit," and "secondary merit," as rewards for bravery. Each unit has its own merit recorder elected by the soldiers. He goes to the front with a notebook and marks down the performance of each comrade.

With the race for merit and glory comes the "challenge system." The Red commissar is an experienced mass psychologist. He knows that Chinese respect "face" and dread the loss of it. A challenge is used to aggravate the soldiers' fear of losing face. If one soldier challenges the other with a statement that he would not quit even after being wounded, the other will surely answer the challenge with his own offer to die in his foxhole rather than be evacuated. While a challenge may have been made casually, once it is made and noted by the "merit recorder," both parties must fully carry out their agreement.

The nature of the "challenge system" was proved in the spring of 1947 when the entire Seventh Column under Red General Lin Piao was "challenged" to decimation at Szepingkai. At that time, Lin Piao commanded twelve columns, of which the Seventh was the smallest. A series of challenge meetings whose commander finally outbid the rest and won the "hero's banner." With the banner went the duty of launching the frontal attack. It did. The battle was won—and ninety per cent. of the Seventh Column were "drowned" in the human sea.

A recent "challenge session" was described by the Peiping radio. The broadcast quoted a "Korean front" report, depicting a battlefield discussion among three wounded Red soldiers who had been isolated on a height on the east bank of the Imjin River. Volunteer Fighter Hsian Erh-shuang, according to the broadcast, challenged his two comrades to "see who will be the best fighter." Liaison Runner Chou Pin and Artillery Squad Leader Chun Wan-fu accepted the challenge, and the three held out on the hillside until Red reinforcement came to their rescue. While this report smacks of propaganda, it nevertheless indicates that the "challenge system" is being used by the Reds in Korea.

Critique meetings after each attack are no less important than preparatory sessions. They serve to keep the human sea rolling.

Those who have faced Red troops get the impression that the Red onrush comes one wave after another. The same impression even led some Nationalists to say that Mao Tse-tung had a frightful "three wave" attack, with reserves deployed in such a way as to give immediate support to the first line troops and to reinforce them for a second attack should the first be frustrated. The Reds hold no substantial reserves in readiness for a second human sea wave. When the first assault meets stiff resistance and the soldiers fall back, Communist cadres hold battlefield discussions during the lull. This is the time when critique, made on the basis of the merit recorder's recommendations and in the form of mutual criticism, self-confession and merit-grading, adds fuel to the burned-out fury of the soldiers. Once again they are reminded of their pledges.

The Reds do not set a definite number of waves in a human sea offensive. In fact they seem to aim at smashing the enemy with their overwhelming number of men in one deadly blow.

Exploiting human frailties, mob psychology and, above all, the chaotic situation in China, the Communist human sea tactics met with unprecedented success on the mainland against the Nationalists. The Red "complaint and revenge" meeting, for instance, was so effectively manoeuvred that many times captured Nationalist soldiers were persuaded to turn their guns against Chiang-Kai-shek after only one "speak-bitterness" session. The same meetings were credited with drawing many Nationalist troops away from Chiang and hastening the collapse of the Kuomintang.

The human sea tactics have not had the same success in Korea. Reports from the Korean front a few months ago mentioned the eerie sound of the bugle which launched the enemy's attacks. More recently there was the "woman in black" who waved a pistol and led a squad of soldiers in night raids. The Peiping radio recently loudly touted the glory of another woman, a pilot who raided Inchon. These and many other signs indicate that the Reds will continue to whip up human sea waves against U.N. fire.

A FIGHTING PATROL in KOREA

Major R. C. W. Thomas, OBE,
Royal West Kent Regiment.

DURING the last six months in Korea, two powerful armies each holding strong defensive positions in wild and mountainous country have been watching each other across a few hundred yards of No Man's Land.

During the day, except for shelling and air strikes by United Nations aircraft, the front is nearly always quiet. But when night falls many patrols and small raiding parties from both sides, slip out from their deep bunkers and trenches, to roam about in the hills and valleys.

They seek to check up on the dispositions of their enemy, dominate No Man's Land, and above all to capture prisoners for purposes of identification. Many sharp engagements are fought, and casualties are suffered by both sides in the never-ending search for information.

This is the story of a fighting patrol made by the Royal Canadian Regiment of the First Commonwealth Division on a night at the end of May, 1952. There is nothing very special about this story, except that it does illustrate the kind of operations that are taking place every night, in many different places along the front line of the United Nations Forces fighting in Korea.

Plan.

The task given to the patrol was to assault a small feature known as Point 117 and to try and capture at least one prisoner. As the enemy was believed to be holding the position with a reinforced platoon in deep bunkers, one officer and thirty men were detailed for the operation.

The plan required the patrol to slip out of a forward company position immediately after dark, cross the valley in front of the feature under cover of tank, artillery, mortar and MMG fire, and then immediately assault the objective, a total distance of approximately 1,200 yards. Prior to the start of the patrol, the enemy position was to be softened by an air strike, which was to take place as near last light as possible.

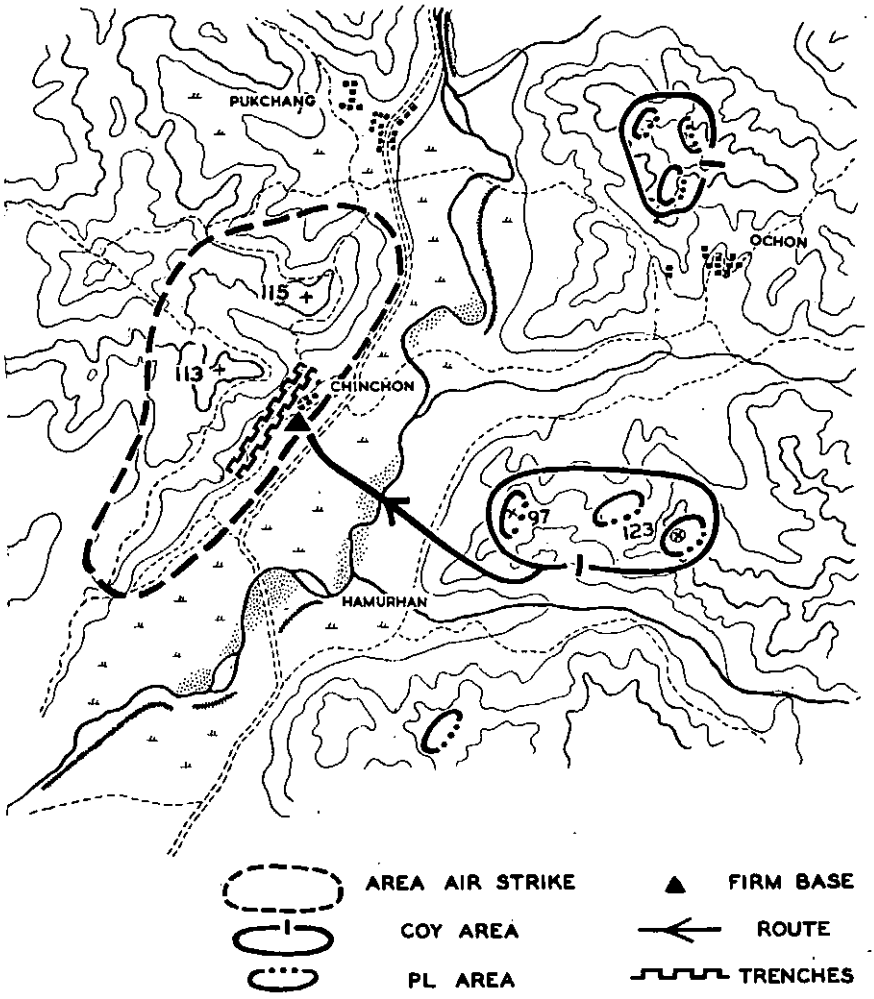
Advance to Contact.

At 1930 hours a very successful air strike was made by eight close support US aircraft, who in turn at

approximately five minute intervals, each dropped two 1,000 lbs. bombs. As soon as the last aircraft was clear friendly tanks, artillery, mortars and MMGs began to engage the areas surrounding the objective.

The patrol left friendly lines at 2025 hours, thirteen minutes after the last bomb had been dropped, and despite the semi-darkness, crossed the valley in under twenty minutes without encountering any enemy opposition.

On arrival at the bottom of the feature, a firm base of 1 NCO 7 men (group A) was established. The remainder of the patrol then moved forward and soon reached the first line of enemy trenches on the feature, which were found to be



shallow and in a bad state of repair. Here the patrol commander established a second firm base of 1 NCO 7 men (group B) and at the same time called by wireless for the artillery fire on Point 113 to be lifted.

Assault

The patrol then continued to move forward, and in due course reached a second line of trenches which also appeared to be deserted. A party of 1 NCO 6 men (group C) was ordered to search these trenches while the patrol commander with the remaining 7 men moved round to the left, to work their way up to the top of the feature and along the crest to the objective.

Group C began their task of searching the line of trenches, challenging each bunker with phosphorus grenades and calling out in Chinese "chu la" (come out). At the third bunker a Chinaman suddenly appeared with his hands above his head saying "me officer." He was seized immediately, and his head covered with a blanket.

The party then heard the sounds of some enemy approaching along a crawl trench from the direction of point 115 and grenades were exchanged, one of which unfortunately wounded the soldier guarding the prisoner who promptly got to his feet and made a dash for freedom, but was instantly shot dead by a burst from a sten gun.

A moment later a second party of enemy was heard approaching from point 113, and a dog fight developed with grenades and small arm fire being exchanged from all directions. Four enemy were seen to fall and three more friendly soldiers were wounded.

Meanwhile the patrol commander and his party had reached the crest of the feature, where they found themselves in a maze of bunkers and trenches and enemy soldiers were heard scurrying about in all directions. Immediately grenades were thrown by both sides and a second dog fight developed in this area.

Withdrawal.

The Commander, finding his party heavily engaged from all sides, and hearing his other group also under fire, immediately ordered his men to withdraw. Rapidly breaking contact, the party moved back to a position alongside group C, who were then ordered to withdraw back to the firm base.

The enemy followed up rapidly, harassing the patrol groups with grenades and small arms fire, and four enemy were killed by bursts of fire from brens and stens at a range of five to ten feet.

Eventually all groups reached the firm base, and artillery fire was called on to the feature again, while the patrol reorganised with the wounded, counted heads and began to withdraw across the valley covered by the firm base group until the main body was clear of the feature, when they in turn also withdrew.

The enemy fire died down gradually, and no attempt was made to follow the patrol across the valley. Therefore the patrol was able to proceed on its way in an orderly manner, and soon reached friendly lines without further incidents.

Debriefing.

When the patrol was debriefed on the following morning it was ascertained that no enemy artillery or mortar fire was experienced, either

by the patrol or friendly lines while the patrol was actually out. This was in direct contrast to experiences during previous patrols in the same area. However, as soon as the patrol had withdrawn friendly positions were shelled and mortared for an hour.

The only weapons used by the enemy against the patrol were burb guns and blast type stick grenades, of which half failed to explode, as illustrated by the fact that one soldier was hit on the head by a grenade without suffering any ill effects.

While the first line of trenches were found to be in a poor state of disrepair and the second in disuse, the trenches on the crest of the feature were well built and formidable. At the same time, these trenches from a sanitary point of view were foul and filthy, and the smell of urine and faeces was a sure indication to the patrol that Chinamen were close at hand. Finally the patrol encountered no wire, mines, booby traps or challenges.

Enemy Information.

The only enemy casualties actually seen were those inflicted by the patrol. These numbered four dead, one believed dead and four wounded.

The documents and identifications taken from the dead prisoner were as follows:

(a) Sheet of notepaper with illegible Chinese writing;

(b) Field dressing, housewife, nail clippers and a fishing line and hook.

(c) Map of Manchuria with some places marked in ink;

(d) Liberation of China 1950 medal;

(e) Five c.c. of scabicide made in Shanghai;

(f) Signature stamp, 10,000 Chinese won money, and communist party book.

From these effects it was gathered that the dead prisoner was in fact Private HO Chee Fah, 9 Squad, 3 Platoon, 55 Battalion. His home appeared to be in the vicinity of Shanghai and he had enlisted in the Chinese Nationalist Army in 1945. He had joined the Chinese Communist Forces in 1948 after becoming a member of the Communist Party.

The dead man was dressed in summer issue clothing and wore gum shoes. It was considered the fish hook and line in a small circular metal tin was probably escape and evasion equipment.

General Points.

All members of the patrol felt that the air strike had contributed largely to the success of the operation, although no particular damage could be seen in the dark.

Light conditions were near perfect in that there was an overcast sky and a one quarter moon. The flashes from the supporting fire also helped the patrol considerably in maintaining direction.

On account of the physical fitness of the men the patrol was able to cross the valley at great speed, making it possible to take full advantage of the covering fire.

With regard to the weapons and equipment carried, several stens failed to fire when required, although all weapons had been test fired before the patrol started.

A blanket party of two men proved invaluable for carrying back the four wounded men.

Conclusion.

And so ends the story of just another patrol in Korea. No sensational results were achieved, but on the other hand there is no doubt that as an operation it was well planned, well rehearsed and carried out with skill, determination and bravery.

Once again it proved that if the basic principles of night patrolling are observed, it is possible for a small party of well trained soldiers to raid successfully a forward enemy position, and then withdraw without serious casualties.

Discipline implies a conception of duty. Nothing will be accomplished in the crisis by the man without a sense of duty. The sentry in an outpost holds his ground in the face of an attack because he has a sense of duty to those behind him. This sense is instilled by discipline because it teaches men to obey orders as a matter of course, to know that it is wrong not to obey them and right, that is their duty, to do so. For the soldier, this conception of duty does not embrace abstractions such as freedom or empire or democracy. In battle a soldier's sense of duty extends only to the friends who are around him. It is the job of the junior leader to encourage this sense of duty: abstractions are the sphere of the politician.

—Field Marshal the Viscount Montgomery of Alamein.

• NEW MODEL JEEP ★

The US Army has announced details of an improved, more powerful model of the jeep.

The old 62 horsepower engine has been replaced by one of 72 horsepower. Improved fuel consumption and a larger petrol tank increases the cruising range from 180 to 300 miles without refueling. Snorkel (intake) and snorter (exhaust) tubes are fitted to enable the engine to function while submerged. A special kit enables the jeep to be adapted for use under arctic, desert or amphibious conditions.

The new jeep is fitted with shock absorbers, larger springs and foam rubber seats to make riding more comfortable for driver and passengers.

★ ★ ★ ★ ★

Employment of . . .
COMMONWEALTH and U.S. FIELD ARTILLERY

Captain G. A. Wood, RCA,
Assistant Canadian Liaison Officer,
Office of the Chief of Army Field Forces,
Fort Monroe, Virginia, U.S.A.

UPON emerging victorious from a major war, one is apt to feel that his own army, corps or service is the most efficient and brilliant of them all, irrespective of the performance of his comrades and allies. This is a healthy attitude provided it is not carried to a ridiculous extreme. Being a gunner of the Canadian Army, I was afflicted with a similar feeling about my own arm to the partial exclusion of the merits of the artillery of other armies, and more especially of those outside the Commonwealth.

Having been posted to the United States for a tour of duty, and, in the course of this tour, having met a number of very fine U.S. Artillery officers, I have been obliged, being a reasonably fair man, to admit that perhaps gunners other than British and Canadian are able to employ artillery, and quite effectively, too. In this paper, which I hope will assist us in understanding the U.S. gunner and his ways, I am attempting to compare the methods of employing field artillery at the Battalion/Regimental level used by the field gunners of the United States and Commonwealth Forces by pointing out the more prominent similarities and differences between the two systems.

I do not intend to compare the technical capabilities of ourselves as opposed to the U.S. gunner except to state that, from what little I have observed of U.S. gunnery methods, the American artilleryman need take off his hat to no one.

U.S. and Canadian Organisations.

The U.S. divisional artillery battalion is organised on a three-bat-

—*From "Canadian Army Journal."*

tery basis, there being six guns in each battery. There are three light artillery battalions in the infantry division, armed with 105 mm. Howitzers, and one battalion of mediums, consisting of eighteen 155-mm. Howitzers. This adds up to a total of 72 Howitzers in the divisional artillery, one-quarter of them being mediums.

The Canadian organisation, on the other hand, provides three field regiments for the infantry division, each consisting of three batteries of eight guns. This gives a total of 24 guns in the regiment and 72 in the division, all being light artillery equipments. It is therefore apparent that the U.S. division has slightly more firepower in its divisional artillery than we, by virtue of having the heavier calibre equipments. Whether or not this is the right balance of firepower is a matter for conjecture and, no doubt, opinions will vary greatly in both services.*

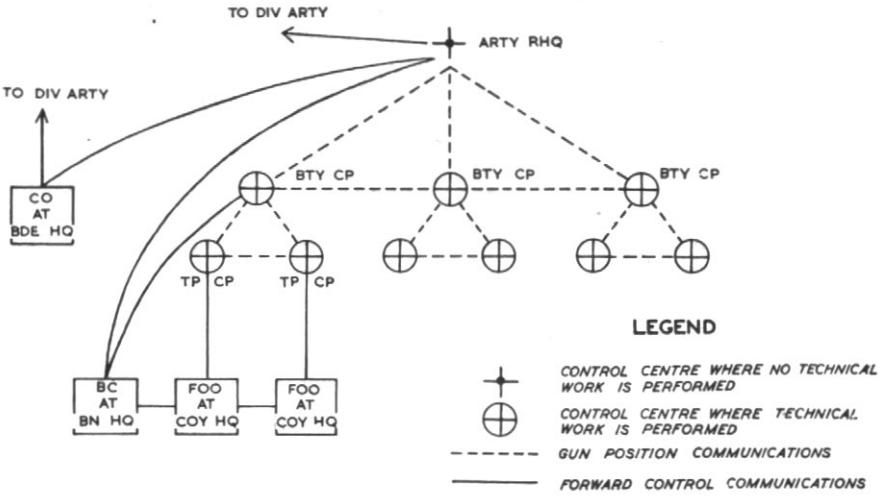
Battery Organisation.

One of the principal differences between the two services lies in the battery organisation. In the Canadian battery we have two troops each of four guns and a battery headquarters troop. The latter is responsible for administering the gun troops, co-ordinating the battery survey, and providing the battery command post. Each gun troop is able to fire independently of the other and without assistance or direction from the battery command post. It has its own troop command post which is responsible for controlling the fire of the guns, carrying out the troop survey, and determining the data to be passed to the guns as fire orders. The battery command post, on the other hand, is responsible for co-ordinating the fire of the battery on all regimental and higher targets and on certain battery targets. For this purpose it is organised to duplicate the technical work performed by the two troop command posts in order to permit control and provide a final check on all technical work done by the troop command posts. If the proper checks are carried out, each item in the sequence of fire orders is confirmed by independent check at least twice and usually three times. No technical work is performed at regimental headquarters but rather the fire of the batteries is controlled and co-ordinated through the battery command posts by telephone and wireless. In the Canadian battery the ammunition and POL is carried in battery transport, resupply being co-ordinated by regiment, while in the U.S. battalion there is a service battery provided to perform these duties and others. This is merely a difference in the allocation of transport which has no real effect on the working of the two types of unit, as control is centralised in both cases, the U.S. service battery having the ability to break down into gun battery portions if necessary for independent operations.

The U.S. battery can be better compared to our troop. It is organised, deployed and fought as a single unit. Its fire is directly controlled from a battery command post but the technical work is done by the fire direction centre at battalion headquarters. The battery officers are responsible for deploying the battery, commanding the gun position, and controlling the fire as

* Although no medium artillery is organic to the Canadian division, it is normal for a medium regiment from an AGRA to be allotted to the divisional artillery when committed.—Editor.

CANADIAN FIELD REGIMENT ORGANISATION.



This gives in diagrammatic form the layout of the field regiment in support of an Infantry Brigade. For the sake of simplicity, the forward control communications for one battery only is given. The basic communications are such as shown in the diagram. The complete system is much more complex, employing wireless and line.

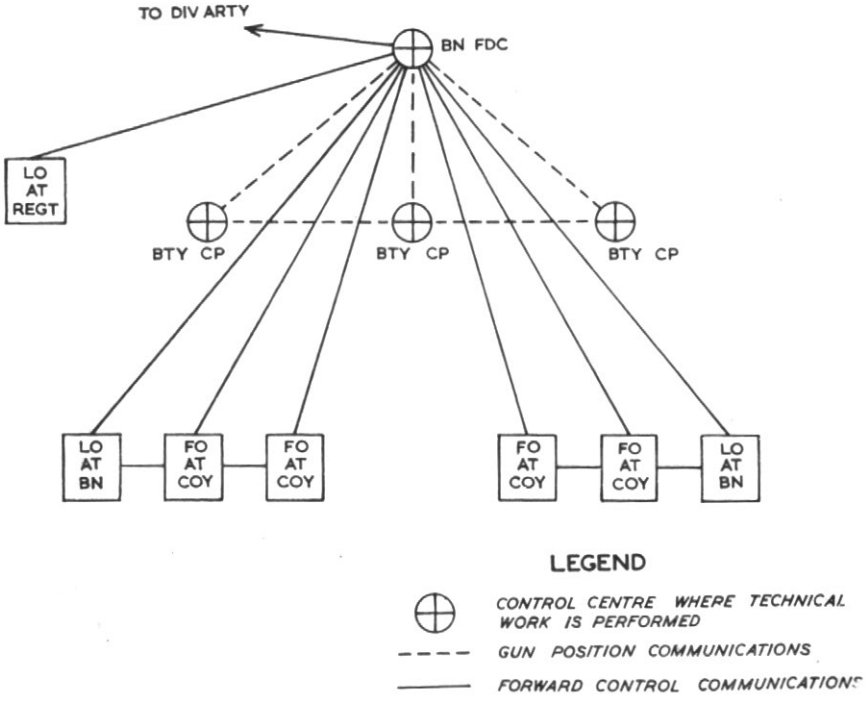
directed by the battalion fire direction centre.

More Rigid Control.

The U.S. artillery battalion is more rigidly controlled than its counterpart, the Canadian regiment. The fire of all batteries on any type of target is controlled from the battalion fire direction centre which does all the technical work for the batteries. All forward observers address their requests for fire to the fire direction centre which in turn allots a battery, or whatever amount of support it feels is required for a mission. The forward observer then passes his fire orders to the fire direction centre which converts them into commands and passes them to the battery or batteries concerned. There is no delay in relaying these orders to the guns, the fire direction centre performing much the same task as a Canadian battery command post might under certain circumstances. Although the U.S. teaching requires battery command posts to perform technical work at all times, from what I can learn this is not always done and varies from one unit to another. In any event, this is desirable but, in most cases, not essential for the functioning of the unit. The main function of the battery command post, once the battery is deployed, is general supervision of the position.

From the above it would appear that the Canadian battery is more self-contained than its U.S. counterpart and perhaps can conduct in-

U.S. FIELD ARTILLERY BATTALION ORGANISATION.



This gives in diagrammatic form the layout of the U.S. Field Artillery Battalion in support of an infantry regiment (brigade) with two battalions up. More Forward Observers (FOs) may be allotted if required. The basic communications are shown in this diagram. Alternate channels, both wireless and line, are always provided and always used as the need for them arises.

dependent operations more readily. This does not mean, however, that it can function more efficiently in this role.

The outstanding difference between the two batteries lies in the location of the command group. The command of the U.S. battery is found at battalion headquarters and the battery command post, while the command of the Canadian sub-unit is found at the observation post and with the headquarters of the unit being supported. The relative merits of these two systems will be discussed in later paragraphs.

Fire Control.

The centralised system of fire control as found in the U.S. battalion has its advantages and disadvantages. With this system fewer numbers of specialists are provided for command post and fire direction centre work. Surveyors and other personnel at battalion headquarters

are trained in fire direction centre duties in order to provide the required relief for the specialists. With this reduction in highly-trained specialists comes fewer problems in the initial training of the unit. This is a most important consideration, especially during the early stages of mobilisation when training time is so vital, school resources are greatly overtaxed, and units must be trained quickly.

Under the U.S. system a small number of trained specialists can carry on for a limited period until the full complement is brought up to a satisfactory standard by in-job training. This is also true of the Canadian unit, excepting that a few more specialists will be required initially. As I see it, one of the principal disadvantages of the centralised system is that "most of the eggs are in one basket," the fire direction centre. There is not the degree of flexibility that there is in the other system. Unless the U.S. battery command post is able to take over and undertake all its own technical work and effect the necessary liaison with the other batteries and the forward observers, it is completely dependent upon the battalion fire direction centre for the firing of the guns and the co-ordination of the battalion's fire. Under the Canadian system of control, the neutralisation of any one of the control agencies would have no effect upon the fire of any of the guns for even a very short period because all levels of control are duplicated. Under the centralised system, according to the teaching, but apparently not always in actual practice, all senior commanders locate themselves at or near the fire direction centre. Should this area become neutralised, the action to assume temporary control of the battalion fire must come from an officer of comparatively junior rank. While this is feasible, it is not the most desirable situation.

Possibilities of the Future.

It is readily agreed that past experience has shown that neutralisation of the fire direction centre even for a short period is a very rare occurrence, but with the enemy artillery we are likely to face in future conflict, especially in the early stages when we will probably be on the defensive more often than not, such occasions should not be too remote to receive very serious consideration. If the U.S. evolved a standard drill for firing the battalion without the fire direction centre, and all batteries religiously performed their own technical work, this criticism would be nullified. If our gun areas are subjected to sudden and heavy bombardment and our infantry at the same time is heavily attacked, our artillery must, as in the past, play a major role in defeating the attack. By decentralising our technical work to batteries, duplicating it at troop level and performing it right on the gun position we are minimising the chance of control being lost. If a troop command post is knocked out, the battery command post takes over as it is equipped to do at all times, and if the guns of a troop are neutralised or knocked out the troop command post is not required, but the rest of the regiment is able to fire as usual. Under our system, in the worst case, at least some of the guns will be able to fire and under centralised control. From a strictly functional point of view, however, I don't think there can be any argument one way or another as regards the technical

efficiency of either system. They both work well and I don't think either can claim more speed or accuracy over the other.

Most Controversial Point.

We now come to what is without a doubt the most controversial point of difference between the two systems. I think it is the crux of the whole matter, for if we were agreed on this the rest would take care of itself. I refer to the organisation for the forward control of the fire of the unit.

In the U.S. battalion the forward observers are found from the junior officer ranks. It is not uncommon for the battalion to use enlisted men as forward observers for short periods until replacement officers become available or until these enlisted men can be commissioned in the field. The artillery battalion commander is represented at the infantry battalion headquarters and the infantry regimental (brigade) headquarters by a liaison officer who is a captain, or possibly a major if the situation warrants it. These are true liaison officers in that they have no command responsibility, but live with the supported unit always, even when out of action. The artillery battalion commander visits regimental headquarters at least daily, and the infantry battalion headquarters frequently. The liaison officers are responsible for acting as artillery advisers to the commanders of the units being supported and as their own commanding officers' representatives with the infantry. They are also responsible for directing the forward observers much as do the Canadian battery commanders.

The final decision as to what artillery support will be provided the infantry battalion rests with the senior artillery commander concerned, usually represented by the artillery battalion S3 (major) in the fire direction centre. The forward observer may request fire but not demand it or order it even from his own battery or battalion. The final decision, therefore, rests with the artillery even up to and including divisional artillery level after which the divisional commander must decide. I do not intend to imply that there is lack of harmony between the U.S. infantry and artillery under this system, which I am sure is not the case, but I merely wish to point out the differences in our thinking on this question.

The Canadian System.

In the Canadian Regiment the reverse procedure is followed. The junior officers (lieutenants) are responsible for the gun positions and all survey and technical work. The senior officers live and work with the units being supported. The commanding officer bases himself during action at the headquarters of the brigade he is supporting and visits his unit daily to attend to matters requiring his personal attention; the battery commanders (majors) live and work with the infantry battalion commanders that their respective batteries are supporting and the troop commanders (captains) are the forward observers for those battalions, being located with the forward rifle company commanders. It is only when the supported battalion or brigade is in reserve or out of action that the senior officers rejoin and live with their respective units and sub-units.

The troop commanders are the forward observation officers and are permitted to call directly upon their

own troops for supporting fire. They normally can call for fire from the battery without reference to the battery commander who is at infantry battalion headquarters, but they will usually have to get his consent to fire the regiment or more artillery. This of course varies with the situation and a policy is laid down at all times by the unit commander defining the amount of artillery a battery commander may use, over and above his own battery, on his own responsibility during the period in question. When a forward observation officer wishes to fire a battery or larger target he may do so through his troop, battery, or the regimental command post, whichever he chooses. Other batteries and regiments follow up each ranging correction as it is given out and by this means all the artillery allotted for the target is ready to fire at the same time as the ranging gun.

The U.S. Attitude.

The U.S. attitude is that the command organisation should remain in the gun area and that all that it is necessary to have forward is the machinery to pass on the requirements to the guns and to advise the infantry on artillery matters. The complete battle siuation is known at the artillery battalion headquarters while the forward observer has only local knowledge. For this reason, the U.S. artillery officer maintains, junior personnel are sufficient for forward observer duties. At the same time, the battalion commander, by at least daily visits to infantry regimental headquarters, effects the necessary liaison with the infantry commander.

The Commonwealth artillery holds that command must be exercised from forward positions with the arms being supported. Our stand is that the man on the spot must be able to turn to his infantry opposite number and state with authority, "I will give you the fire you want," or "I advise against it for the following reasons . . ." After stating his reasons the gunner must leave it to the infantryman to decide the question, provided it is possible to supply the fire requested, as the battle at hand is the infantry commander's responsibility and the gunner is there to help and advise him, not to fight his own battle as he sees fit. Because we follow this principle we provide quite senior officers for the forward command functions (one rank junior to the infantrymen with which they deal) so that their opinions will be treated very seriously by the infantry commander and their influence will be felt.

Greatest Point of Difference.

This is the greatest point of difference in our thinking and it is most difficult for a gunner to lay aside personal loyalties and look at the problem completely objectively, as each line of reasoning has its own merits. One may perhaps cite a number of cases where U.S. artillery support has suffered because of differences of opinion between the infantry and artillery which could have been avoided if a more senior artilleryman had been on the spot. On the other hand, the U.S. gunner can produce literally thousands of cases where the relationship was completely harmonious and could not have been improved.

There are other differences between the units of the two services but these are very minor. We have different communications systems

but we are equally communications-conscious and follow the same principles to provide the maximum flexibility and the minimum chance of break-down. We both, in our forward control communications, provide our armies with their main channels of battle intelligence. We both almost dogmatically practise the principle of concentration of fire and we both resist vigorously the tendency of anyone to disperse and dissipate the artillery effort. We have both produced more than our fair share of our nations' top commanders and we both have succeeded in convincing our comrades in the other arms of the service that, in paving the way for the successful operations of all phases of war, the importance of artillery to them cannot be over-emphasised.

From the foregoing it would appear that the U.S. and Commonwealth artillery, although differing somewhat as to the means to be taken to attain the end, operate on the same sound principles and produce an almost identical end item, concentrated fire on the ground where and as it is required. I personally prefer the Commonwealth system. On the other hand, I should not expect an officer trained in the other system to have the same preference.

The advantage of guerillas lies in their mobility. They filter through the adversary's ranks, reappearing in his rear to attack wherever they can find the point of least resistance. They constantly threaten the communications and lines of the opposing units, and their threat is at the same time one of their best means of defence. Then, again, partisans need not fear attacks on their rear, and loss of ground is of no importance to them. From the strategic aspect they have nothing substantial to lose and consequently nothing to defend.

—Lieutenant-Colonel F. O. Miksche in "Secret Forces."

ON ARMY EDUCATION

3—Its Value to Soldier and Nation

Major A. W. John,
Director of Army Education.

A LEADING article in "The Argus" of Monday 14 July 1952, under the heading "Starved Minds," commenting on the question —"Are too many people losing the capacity to entertain themselves?"— surveyed the effect of mediocre synthetic entertainment such as many films and radio programmes provide. "Full credit must be given," continued the article, "to civic organisations that are doing their best to remedy this: local town halls, municipal libraries, the Council of Adult Education, the University Extension Board."

The writer might have added the educational services of the Navy, the Army and the Air Force for they are making no insignificant contribution towards the remedy. The omission is understandable when one considers the sort of unawareness mentioned in the first of this series of articles.

An Education Service was introduced to the Australian Army in June 1941, and what was said then by such national figures as the Hon. P. C. Spender, Sir Robert Wallace and Professor R. C. Mills remains substantially true of the present day. Much has been achieved in the last ten years, but if the wartime AAES had left no other legacy to the Australian Regular Army, the excellent free lending libraries which now exist would have amply justified its inclusion as part of the normal army organisation.

Perhaps the main difference between the wartime AAES and the present AAEC is in the fact that whereas the former had to place its main emphasis on education for return to civil life, the latter must place its main emphasis on education as the basis of army training and promotion standards.

There is another sphere which is just as important to the army now as it was then and in this connection we can do no better than quote a statement by the American CGS, General Lawton Collins: "The techniques of leadship are many, but one of the most important is to tell the soldier the why of things . . .

The Troop Information and Education Programme was instituted for that purpose. The practical benefits to be achieved from it, although less tangible and less easy to measure than those of most other training activities, are nevertheless as real and compelling."

"Less tangible and less easy to measure"—aye, there's the rub! Having admitted the importance of education, how are we going to measure the extent of the resources we are to devote to it in men, materials and money? You cannot measure it like rounds of ammunition, rations, or shillings collected at the pictures. What method are we to adopt? Are we to leave it entirely to the men who know the price of everything and the value of nothing, or to those who know the value of everything and the price of nothing?

This in itself is quite a problem because nobody with any conscience in his job wishes to waste scarce resources. However, leaving the "price experts" to bite lumps out of the "value experts" until they are bailed up in a corner, paralysed and unable to plan anything ahead is no method at all.

Struggling on the one hand with the troops for whom the education is intended and on the other with the "price experts," many education officers have foresaken the field for jobs where there is full-scale demand. Others, somewhat bewildered at times by the jeers of the Philistines, believe strongly enough in the value of the work to keep right on, thus qualifying one would feel for the right to be heard.

There is probably no satisfactory basis for a hard and fast method of deciding the limits of educational planning. Success must ultimately depend on a better sense of values all round. To achieve this a wider understanding is necessary and that, after all, is the purpose of these articles.

The proportion of full time educational personnel (RAEC) in the British Army to the total number of troops is five times greater than the Australian proportion. An American infantry division headquarters has a Troop Information and Education establishment of one major, two captains and three non-commissioned officers. Each American battalion has one lieutenant and one other rank. The Australian scale is about one-third of this.

Just what success the British and Americans have with their education programmes would be hard to say without some opportunity to make a first hand survey. Usually when statistics are obtained by outsiders it is with a bias—they are either "pro" or "anti" and not just trying to see what could and should be done. We do know this, however, that the results achieved by the Australian Army Educational Corps add up to quite a substantial total.

Some overall statistics for July of this year are: AAEC personnel to total strengths of ARA and NS Training formations combined—1 to 500. There were 819 attending classes (not including full time students at the Apprentices School) and 979 enrolled in correspondence courses (as at 31 July). 227 lectures (mostly on current affairs) were given to audiences totalling 8,321. Educational films were shown to 117 audiences totalling 6,821 and 13,339 books were borrowed from AAEC libraries during the month. There

were other activities. There is no need for "starved minds" in the army.

What might appear relatively insignificant educational activity in one unit, when consolidated with the figures for all units, is seen to contribute to a worthwhile total effort. It would be no exaggeration to say that a considerably higher proportion of members in the army is in receipt of some form of planned further education than adults in civilian circles. With renewed efforts by the Corps and expanding co-operation, we feel reasonably confident that the foregoing results could be doubled.

The planned unit programme is very important, because it not only creates an awareness of the needs and possibilities but also indicates to the troops that education is a vital force and not something to be sneered at. We might not get every man spending his spare time in studying, reading, discussing current affairs, or making things, but we have harnessed the existing demand, encouraged the diffident and banished frustration.

If anyone thinks that this is not worthwhile, he is "thinking in a different language." If he falls back on the contention that it is new and therefore suspect, we must again draw attention to the fact that education in the British Army has a tradition of over 150 years. Napoleon, who wrote: ". . . in the long run the sabre is always beaten by the intellect," should have known what he was talking about for General Carnot had already remodelled the French Army, using among other methods the indoctrination of troops by Education Officers, who instructed them in what they were fighting for and what they were fighting against. That new republican army became invincible against the combined forces of the crowned heads of Europe. Though these early objectives were lost sight of in the extension of the Napoleonic campaigns all over Europe, they achieved their initial purpose, the preservation of the Republic.

The notion of the soldier as a highly dispensable unit of society went out with the days of the press gang. Whether he realises it or not, the concept of "total war" has given every man a personal stake in the quality and standards of the army. Quality and standards are not matters of smart uniforms and efficient equipment alone, but of what goes on in the minds of the men who use them. It must never be forgotten that the army is part of the community and not a community apart.

It follows that whatever raises the standards of the army raises the standards of the nation as a whole. Among the factors which contribute to the raising of standards, can any reader name one more important than education? He might name one of equal importance—"discipline"—but none of greater, and a moment's reflection will show that education will improve the quality of discipline.

The army is a particular sort of environment, in the same way that a university is a particular sort of environment. The purpose of the one, in peacetime, is skill-at-arms and of the other higher learning. Each probably achieves its purpose as well as any other human agency, but whereas the army trains its members for destructive purposes, the university trains its members for constructive purposes.

The army environment might become utterly soul-destroying were it not for the concept of the army as a necessary form of national insurance in our present world state of uncivilisation. Upon this we may build ideals of duty and service through training. To supplement these concepts, and for the sake of the whole community as well as of the individual soldier, we need constructive features in army life to offset its unproductive and wasteful aspects.

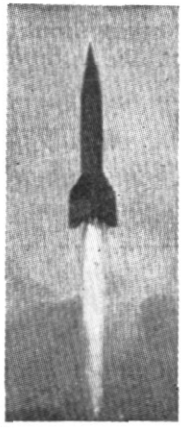
None would expect the army environment to become as purposefully dedicated to education as the university environment, but the analogy is valid, for here also we have men "living-in," men producing nothing of constructive value, men preparing for an employment which, on the one hand, every sane member of the community hopes will never eventuate and, on the other, for an employment which is part of the normal life of the community.

Obviously there is no suggestion here that army educational standards could possibly compare with university standards, but what a wonderful opportunity exists to raise standards, increase skills, spread appreciation of our democratic institutions and promote understanding of international affairs. To achieve this in full measure, we will need the understanding and co-operation of all who have the welfare of the army and of the nation at heart.

When we have succeeded in making every national serviceman think of himself as a "citizen-soldier" and every regular of himself as a "soldier-citizen" in the best senses of those terms, we will have achieved something of inestimable value to the Australian nation.

THE IMPACT of GUIDED MISSILES on GROUND WARFARE

Major Nels A. Parson, Jr.,
Artillery, U.S. Army.



COULD the story of the Normandy invasion have been written as follows?

Prior to D-day, the Germans carefully located their guided-missile units to cover the long vulnerable coast line of Western Europe. The 1st V-2 Division had one regiment located near Brussels and the other at Amiens. The 2nd V-2 Division was deployed in the area between Reims and Paris. The 155th and 156th V-1 Regiments were in position northwest of Paris. All guided-missile units were well dispersed and camouflaged, and had an ample stockpile of missiles on hand.

When the allied command committed its forces at Utah and Omaha Beaches on the Normandy Peninsula, German guided-missile fire was initiated at once. The two V-1 regiments concentrated on the beach-head. On shore targets, the 2,000-pound fragmentation and incendiary warheads were delivered 20 at a time, at 15 or 20 minute intervals. With a radial probable error of about 2000 yards, the effect was devastating. Some V-1 missiles were fired singly toward the invasion fleet. Automatic target seeking devices in the missile noses steered the weapons into ships with about one-third of the missiles securing direct hits.

—From "Military Review," U.S.A.

Docks, troop concentrations, and supply depots in the Portsmouth-Southampton area were the targets for the two V-2 divisions. Many fires were started and casualties mounted into the thousands.

To counter the German weapons, all available aircraft were dispatched to obliterate the launching sites. The air attack was only partially successful for the Germans abandoned their positions and moved to alternate sites somewhat closer to their targets. By constant air patrolling over all possible areas from which the Germans might begin firing, the invaders managed to discourage all but harassing fire at night. The British and American forces continued their build-up on the beaches for another week.

An impending storm then struck the entire area halting almost all air and sea activity. At the same time, the Germans unleashed a counter-offensive on the beachhead, supported by heavy fire from all V-1 and V-2 units. With a hurricane at sea and their position untenable, the invasion force held out until 23 June, when small-arms ammunition was exhausted and nearly 50 per cent. of the troops were casualties. Between D-day and the time of the surrender, some 70,000 troops on shore were lost as prisoners or casualties, and at sea 38 ships and 10,000 men were lost. The invasion fleet withdrew and the entire operation was suspended.

Is this sensationalism or a realistic picture of what might have happened? Will guided missiles ever have such an influence on warfare?

A great deal of confusion has centred around the potentialities of guided missiles in future warfare. Not only has the civilian been exposed to many varying theories of "push-button" guided-missile warfare, but the military man also has had difficulty in evaluating this new weapon. Originally, the high security classification of all information pertaining to the subject hindered the spread of a sound understanding of guided missiles. Yet, there are available now scores of unclassified articles, reports, and texts on guided missiles. But much of such reading matter is of so technical a nature, or is so obscure where tactical employment is concerned, that a person making a study, unassisted, finds the task too tedious. The matter of primary interest to most army officers is the effect of this new weapon on ground warfare. They ask, "What can it do? How can we use it?"

Factors Affecting Ground Warfare. What will be the effect of guided missiles on ground combat operations? The guided missile, as a weapon, must be considered as one of several factors which will determine the nature of the next war. These factors are:

1. **The Enemy:** His war potential, his political and military aspirations, and his location, routes of approach, terrain, and vulnerability.

2. **Our Own War Potential:** Obviously, our industrial potential, source of war materials, population, land mass, and vulnerability to attack determine our ability to wage war. Our immense industrial output, for example, will permit us to use comparatively large numbers of guided missiles; an achievement few other nations can duplicate.

3. **Our Strategic Objective:** Ultimately, our strategic objective in warfare is to destroy, or neutralise, the ability and will of an enemy nation to threaten our national sovereignty. From a practical stand-

point, the achievement of this objective may vary greatly, and, therefore, alter the nature of our ground operations.

4. **New Weapons:** The aeroplane definitely has changed some aspects of ground combat. What of the guided missile?

5. **New Defensive Means:** In World War II, radar greatly improved air defence. The anti-aircraft guided missile eventually will have an even greater influence on air warfare.

The major decisive forms of warfare—air, ground, and naval combat —will all be influenced by the introduction of guided missiles. Also, it must be remembered that air, ground, and naval warfare are mutually interdependent. Therefore, a new anti-aircraft guided missile will not only concern air warfare directly, but will also affect ground warfare in a very definite, though indirect, manner.

The Surface-to-Surface Missile.

What is the direct effect on ground warfare of the ground-launched guided missile destined for enemy surface targets? This weapon is referred to in guided missile terminology as a surface-to-surface missile or "SSM."

There are two basic types of SSMs that will be used in support of ground operations—rockets and atmospheric jet missiles. The first type carries both its fuel and oxidiser and is not limited to flight within the atmosphere of the earth. It has a trajectory similar in shape to that of an artillery projectile. The German V-2 missile is an example of this type.

The second type is a winged missile which carries its own fuel, but utilises atmospheric oxygen to burn its fuel. The German V-1, or "buzz bomb," is an historic example of this type of missile. The atmospheric jet missile is generally slower than the rocket; is limited to flight within the atmosphere; and is more vulnerable to enemy counter-measures. Yet, since it resembles aircraft in many respects, conventional airframes, propulsion systems, and fuels may be used in the producton and employment of the missile. This is an important advantage of the atmospheric jet missile. At present, the rocket-propelled guided missile is generally considered the better missile at shorter range, while the atmospheric jet is more suitable for extreme range.

The range of SSMs varies tremendously. Eventually, we may employ in ground combat SSMs varying from small anti-tank missiles, with only a few thousand yards range, to large missiles carrying several tons of warhead hundreds of miles into enemy territory.

The Need for Surface-to-Surface Missiles.

One may logically ask why we need SSMs. What target will they be used against? Guided missiles are needed not for some important new target, but for attacking existing targets, under special circumstances, which make their use more profitable than the use of artillery or aircraft. First, review briefly the limitations of conventional artillery and aircraft to determine why there is a need for guided missiles.

Artillery has inherent limitations in range, lethality, and accuracy. Accuracy limitations are largely

overcome by mass fire, and lethal effectiveness is also improved by the mass fire technique. Range is the most important limiting factor in artillery. The only answer to this problem is increased muzzle velocity which is always accompanied by greatly increased size and weight of the gun. Conventional artillery, as we know it or with foreseeable improvements, cannot be considered a practical, mobile support weapon at ranges greater than 20 or 25 miles. The SSM is needed, then, to provide accurate demolition fire against heavily protected targets within artillery range and to extend the effective range of artillery.

Why are SSMs required in addition to aircraft? Certainly the range of aircraft is almost unlimited and aircraft bombs have great destructive effect. How can a target be beyond the capability of aircraft? First, aircraft often will not be available to the ground forces because of adverse weather conditions. Weather is an uncontrollable factor in the employment of air power. Because of weather, aircraft are not capable of providing the continuity of fire support that ground forces need. Ground commanders are unable to depend upon air support entirely when planning operations and must be prepared to carry out their missions without it. When air co-operation is an integral and vital part of a ground force plan, then the success of the entire operation is dependent upon favourable weather conditions.

Second, the primary mission of tactical aircraft in support of ground operations is that of achieving and maintaining air superiority. We cannot expect air superiority at all times. Therefore, the attack of ground targets is a secondary mission which aircraft will not undertake, to any great extent, until the enemy air power is neutralised. Also, a ground target may have such an effective air defence that sustained air attacks can be undertaken only at prohibitive cost. Finally, the limited accuracy of aircraft bombing should be considered.

Therefore, the role of the SSM in ground warfare is to attack surface targets when artillery or aircraft either cannot be used or are less desirable because of their inherent limitations. The supersonic SSM is almost completely invulnerable to enemy counter measures. No lives are risked as they are when aircraft are used and little or no advance warning is given the enemy. Of extreme importance to the ground commander is the fact that the weapon will be directly under his command, immediately available for attacking targets at his discretion.

The SSM is not without disadvantages. Of foremost concern is the present limited accuracy of the weapon, especially when fired great distances. The V-1 and V-2 missiles had a circular probable error on the order of 4 per cent. of the range. This inferior accuracy is certain to be improved. The dual problem of accurate target location and missile dispersion is not easily solved, but there are definite indications that SSMs ultimately will be highly accurate. Another drawback is the logistic effort involved in SSM employment because of construction costs and supply problems.

Tactical Employment.

Consider how this weapon might be employed tactically. Because of two major drawbacks—missile dispersion and the limited number

available—SSM targets must have two important characteristics; they must have an area commensurate with the accuracy of the missile and they must be of unusual importance. At ranges of 20 to 100 miles, targets which may be considered appropriate for SSM attack are major troop concentrations, marshalling yards, supply depots, important command centres, ports, and beachheads.

At closer ranges (perhaps up to about 50,000 yards), smaller targets which might be appropriate for SSM attack are heavy fortification, important bridges, troop concentrations, supply dumps, and vehicle concentrations.

Many attacks on targets deep in enemy territory may be made for the purpose of isolating the battlefield. Other targets may be attacked by SSM for the purpose of destroying the target itself rather than disrupting the enemy communication system.

Some means of target observation is extremely desirable in the employment of SSMs. Targets must be discovered and located accurately although a large proportion of the firing itself may be unobserved. After attacks, a damage analysis of the targets must be accomplished. Visual, photographic, and radar reconnaissance must be utilised to the fullest extent. Photo- reconnaissance guided missiles may be used in addition to other more conventional means. Enemy missile launching sites and artillery positions will be accurately located by means of radar observation.

Guided-missile fire, like conventional artillery fire, should be employed in mass, both for the purpose of fire control, and for its effect on the enemy. To permit the use of mass fire and to ensure co-ordination, launching sites will be controlled by battalion-size organisations.

Level of Employment.

Shall the SSM battalion be employed at division, corps, army, or army group level? At every level the commander needs supporting fire commensurate with his zone of interest. Present artillery, while adequately covering the zone of interest of the division commander, falls short at corps level and above. A 50,000-yard missile, employed at corps level, probably would not exceed the area of responsibility of the corps commander. However, if an SSM has a 100 mile range, it presumably will reach target areas beyond division or corps responsibility. A battalion firing this type of missile probably would be attached to the army for general support, under the command of the army artillery commander. The SSM, being an artillery weapon, very properly belongs under the artillery commander. Battalions attached to individual field armies may be given fire missions by the army group or theatre commander, and yet be available to the army commander. SSM battalions at army level could be in general support of the army, reinforce the support of a corps or be massed on army group or theatre targets. Visualise the devastating impact of five or six battalions massing on an enemy division concentrating to make a river crossing. Without warning, 25 to 30 tons of high explosive would strike the enemy area simultaneously with a speed and accuracy not possible with any oher weapon.

The potentialities of an atomic loaded guided missile are even more awesome.

Some SSM battalions may be employed at army group or theatre level for attacking targets which influence the campaign as a whole. Such high level "artillery" may have a range of several hundred miles.

Technique of Employment.

In offensive operations, SSMs can be employed to support almost any manoeuvre. In a penetration, SSMs can be used for direct support of the main effort and for isolation bombardment of the area to prevent the enemy from committing his reserve against the penetrating force. In an envelopment, isolation bombardment can immobilise the enemy being engaged and hinder the movement of his reserves to a critical flank. The attack of any communication bottleneck developing in the enemy rear area as a result of the completed envelopment also may prove profitable. In a pursuit operation, or in a turning movement, the long range of SSMs can be used to great advantage. In fact, guided missiles will be particularly useful in any operation where the rate or nature of movement makes conventional artillery support inadequate or impossible. For example, in amphibious, airborne, jungle, and mountain operations, SSM fire can be used to supplement normal fire-support weapons from great distances.

In the defence, guided missiles may play a most vital role. If the enemy is on the offensive, he must concentrate his forces; and these concentrations can be attacked with devastating effect. Guided-missile artillery units will not have to move long distances to meet an attack at an unexpected point. The range of the weapon will permit the rapid shift of fire (from launching sites placed well back in a defensive situation) to any point along an extremely wide front. A 100-mile-range missile at field army level not only can fire along the army's entire front, but along the fronts of adjacent armies as well. In the near future, no preponderance of enemy force on the ground, or in the air, will be able to eliminate defensive guided-missile fire until the launching sites are overrun. The continuous employment by the Germans of the V-1 and V-2 to the very last, in spite of overwhelming opposition in the air and on the ground, proved this principle. Only the inferior performance characteristics of the V-weapons prevented their widespread use in this defensive role.

Guided Missile Logistics.

Guided-missile units will require considerable logistic support. A rocket-type SSM ready to fire may weigh up to 10 times the weight of its warhead. This means that for every ton of high explosive delivered to the enemy as much as 10 tons of material must be transported to the launching site. In the 100-mile-range category, guided missiles may weigh from 3 to 10 tons. Firing large numbers of these will be, in terms of tonnage, like firing large volumes of medium artillery with the gun itself being launched with each round. Yet, battlefield supply is simplified because the missile can be brought up in light separate loads, assembled, and fired from areas far behind the front lines.

Production costs also must be taken into consideration. It required about 900 man-hours of German labour to produce a V-1

missile and 4,000 man-hours to build a V-2 rocket. The production time for our own SSMs probably will lie somewhere between these two figures; and perhaps with modern mass-production methods, it will be closer to the lesser figure. This is an impressive, but not an impossible, figure for a single round of ammunition. Moreover, while the cost for each round may be high, the total expense of destroying a particular target may be less with guided missiles than with any other weapon because of the increased accuracy and lethality of guided missiles.

Another important logistic factor is that, since complicated equipment is being handled, there will be a need for a large number of skilled technicians in the combat unit as well as in the supporting units. The logistic effort in the field of guided missiles will be great, but employment of SSMs in support of ground operations will not only prove logistically possible but logistically profitable.

Conclusions.

In the light of present development, it appears that guided missiles will have the following direct effects upon ground warfare:

1. The depth of the combat zone will be greatly increased. Many targets which once were considered strategic, because of their distance behind enemy lines, will become tactical. Indeed, the concept of dividing strategic and tactical employment by a measurement of distance is an erroneous one. If troops or material that can be moved into battle within a few days are tactical targets, then is not an enemy airborne division assembling a thousand miles away for a combat mission a tactical target?

2. The increased dispersion of troops and material will be necessary. The massing of troops will have to be done quickly and secretly, followed by rapid dispersal. Increased dispersion of forces means greater demands on small unit leadership and discipline. Commanders at every level are likely to find themselves operating independently. A sustained and definable "front" may be the exception rather than the rule.

3. A greater continuity of ground action, regardless of weather conditions, will be possible. Since the guided missile is an all-weather, day-and-night weapon, ground forces no longer will be wholly dependent upon aircraft for the neutralisation of critical ground targets which are beyond the capability of artillery.

4. Ground operations including guided missile units will become increasingly dependent upon logistic support. Hence, supply lines and sources of supply will grow in importance as targets.

5. The defence will, temporarily, have an advantage over the offence. SSMs will be particularly valuable in countering an enemy offensive by devastating fire whenever he attempts to concentrate. However, as missile accuracy and guided missile counter-measures are developed, counter-missile fire will reduce the advantage of the defender. Eventually, the only effective defence will be an active and mobile counter-offensive.

6. The cost of war will increase. It has been said that in Caesar's time it cost about 75 cents to kill a soldier in battle. In Napoleon's time it cost 3,000 dollars. In World War I it cost 21,000 dollars, and in World

War II, 200,000 dollars. If these figures have any semblance of verity, what will it cost in a war involving the consumption of thousands of guided missiles? This point is introduced not because the large-scale employment of guided missiles will be impossible, but because production costs will be great, and, therefore, should be included in any war plans.

With the passage of time, continuing developments will only accentuate these changes. This time factor makes an accurate appraisal difficult, and any dogmatic conclusions without considering time would be impossible.

On the subject of future warfare there are two extreme schools of thought. The more appealing is the "push-button" concept which holds that future wars will be won or lost solely by intercontinental battles with atomic guided missiles. The other contention is that the atomic bomb is merely a bigger bomb and does not alter the fact that war must be won on the ground; that all weapons of war exist to help the ground soldier advance. For the coming decade, though, the correct solution lies somewhere between these two extremes. Even if the weight of decisive military action were to shift entirely to air warfare, ground troops would have to repel enemy invasion attempts, seize bases needed for launching air operations, and physically occupy critical enemy territory. In any operations there will be ground targets beyond the capabilities of either artillery or aircraft. The guided missile, as the third and newest fire-support weapon, will complete the team, by providing fire support whenever and wherever needed.

Knowledge of ground and fire equip the infantryman with a shield against the enemy's fire. His best means of protection lies in his ability to diminish the target which he offers and to hit the target which the enemy offers. . . . The modern infantry soldier must be stalker, athlete and marksman.

—Liddell Hart.

THE PLACE of MILITARY HISTORY

Cyril Falls,
Chichele Professor of the History of War,
Oxford.

WHEN I sat down to write this week's article I had just finished preparing a lecture to be delivered at the Royal United Service Institution on "The Use of Military History." My audience was to be military, so I had to deal with the subject mainly from the point of view of professional military men. Yet I did not state, and I have never considered, that this subject should concern them alone. On the contrary, it appears to me that complete lack of interest in it, above all, failure to estimate the causes which make for war and the probable nature of war and its effects in varying circumstances may constitute a weakness in a democracy and has, indeed, done so in our past. "The story of the human race is war," wrote our present Prime Minister twenty-three years ago. "Except for brief and precarious intervals there has never been peace in the world; and before history began murderous strife was universal and unending." This view stands in flat contradiction to one prevalent in the Victorian age and popularised by an historian read by almost everyone who could read, John Richard Green, that war played but a small part in history, and least of all in our history. He was wrong when he wrote, and the statement looks fantastic today.

For those following the profession of my audience in the splendid building created by Inigo Jones, I have always been convinced that the study of military history is useful. They naturally approach it with another outlook and with greater concentration upon its detail and its technicalities than students of general history or the wider public. The essential aims are, however, the same, and the curiosity aroused in the seeker follows similar lines. I began my lecture by an effort to define those aims. First, the general reader wants to know "what the people of other times were like." So the military student strives first of

—Reprinted with permission of the "Illustrated London News."

all to discover what the fighting-men of old wars were like. Then, in general history we look for the origins of institutions, ideas, and customs. So in military history we seek the origins of theories of strategy and tactics, administration and discipline. Next, we search in general history for the characteristics of nations. Again it is necessary as well as interesting for the military student to examine those national military policies which reproduce themselves over and over again. Lastly, I put it that general history is read for sheer pleasure and because readers find it aids them to see and place themselves, and that military readers find the same.

High policy and strategy, I pointed out, change with the passage of time to a lesser extent than tactics, and are therefore of greater concrete value to the student; though this is not to say that no profit is to be found in tactics. I then selected instances from old wars, one from the Second Punic War, one from the campaign of Louis XII of France in Italy, a third from the French Revolutionary Wars, and strove to show that, despite the vast changes in weapons and equipment in these widely separated wars and between the last of them and our own time, certain principles emerged which could be applied to all four epochs. I tried to prove that, not only were factors such as Germany's fear of a war on two fronts in 1866, 1870, 1914 and 1939, and Russia's itch for the Bosphorus and Dardanelles, under Tsar or Bolshevik dictator, constant, but that the strategy in three wars covering a span of 2000 years was worth attention a century and a half after the last.

I go back to those words of Mr. Churchill: "The history of the human race is war." If the course of that story had altered, it would be reasonable to regard military history as an interesting hobby, like stamp-collecting, perhaps even—as I put it in my inaugural lecture at Oxford in 1946—"in a category approaching that of the history of prostitution, to be handed over to a number of specialists, some of them suspect or even shady." But we have no reason to suppose that it is all behind us. Neither does the disease seem to have become more benign. On the contrary, this fever of war tends to become more malignant. While, therefore, military history may be a fascinating hobby, it possesses an actuality, a significance, which make it desirable that a large proportion of intelligent people should devote a certain proportion of their time and brains to its study. And it must be confessed that the general historians, even great figures among them, who have not thought well to do so, often labour under false impressions and communicate them to their readers.

In my lecture I combated the views expressed by some eminent soldiers that, even for the professional, time spent upon military history is largely wasted. If it does not profit him, it can hardly be of value to the student of other forms of history. My thesis is not, it need scarcely be said, capable of proof as though it were a problem in logic. And yet, applied to some instances, it may almost be that. It so chanced that after I had prepared the lecture, but before it had been delivered, I heard a discussion between officers whose experience went back only to the Second World War. The subject was a feature of German tactics, and one speaker put forward the view that a certain form

of action which he had himself observed might have been common in the German Army during that war. Now, in fact that form of action had its origin in the First World War, and can be traced as a general principle in German military doctrine continuing throughout the period between the two great wars and carried on into the second of them. It struck me that it was an excellent thing for the speaker in question to have worked out the idea actuating the German tactics from his own observation. On the other hand, it would have been useful if he or some other in the company had realised that what he saw was a principle in action. As matters stood, he had no means of knowing that what he saw was anything more than the inspiration of the moment or belonging to patricular circumstances in a particular campaign, whereas, in fact, the theory had almost universal application.

This was the field of tactics, which, as I have pointed out, change more frequently, more rapidly, and more completely, than strategy. The opinion is often advanced that strategy has been so heavily influenced by the range of weapons and the invention of new ones, as well as by the vast amount of paraphernalia which modern forces carry about with them, as to put former ideas on the subject entirely out of date. This is a shallow view. Methods alter, and many new factors have to be taken into account, but the framework remains. Certain of the great problems which came up for solution in the Second World War, such as the relation between strategy in Western Europe and in the Mediterranean reveal indeed changes which may be likened to the difference in the uniforms of the officers discussing them at various periods, but at the same time an essential likeness. It was not the first war in which the pros and cons of concentration and dispersion, direct attack and diversion, had to be weighed. It was not the first war in which Britain had to work with an ally who subordinated the common interest to a particular interest or looked forward to obtaining post-war advantages over the nations engaged on her side almost as eagerly as to the defeat of the common enemy.

Nor was this the first war after which faithlessness in allies and the breach of engagements speedily brought about regrouping of interests so that the former ally now represented the greatest danger to peace and the former enemy began to appear the only possible make-weight against ambition and aggression. The historian may note how the old theory of the balance of power, condemned as an anachronism and a danger during the war, reappeared and was adopted almost as soon as it was over. Its restoration was due, not perhaps to a change in the principles of our statesmen—Mr. Bevin had been among those most outspoken in its condemnation—as to the inevitable force of circumstances. It arouses none the less the reflection that, unless the world undergoes a reformation which looks improbable at the moment, the balance of power may prove to be, as it was in the nineteenth century, the best barrier to wars between great nations.

The main fields of history are political and economic, the second having reached equality of status, perhaps still a bare equality, with the first in recent times. Military

history may be considered slightly less important than either, but it is, I contend, required for the understanding of both. Sometimes it uses a jargon which repels the newcomer, but this is not necessary and is not entirely absent from economic history either. For the production of complete and rounded historical recording the specialists in the three fields should work in closer communion than they generally do and borrow more amply from each other's ideas and material. And if we demand of the military historian that he should humanise himself, which he of all men ought to do, because the human factor is of such high importance in war, the same plea ought to be addressed to the political historian, especially the diplomatic, and to the economic. I do not mean by this the military historian should avoid technicalities. Campaigns and single battles hang upon technicalities in tactics, arms and supply; their results cannot be understood without reference to these factors. But when handled by a competent historian with a good pen they are all readily comprehensible. It is the execution, the control, which is difficult.

The foremost need for an understanding of military history is that we are all the heirs of war. It has helped to shape our development and our surroundings. And on countless occasions it has done so not by any process of inevitable destiny but in unexpected and unpredictable ways. The influence of great commanders, of the forces under their orders, and of the strange chances and accidents which form eternal features of warfare have brought about great changes in the development of mankind. Where they cannot be considered wholly responsible for such changes they have even more frequently hastened them. The career of Napoleon is only the outstanding modern example of this truth. In other cases they have retarded the advent of the inevitable, and perhaps the intervening time has given birth to modifications which would not have occurred if the change had been sudden and violent. It is also a weakness, to which some historical minds are particularly prone, to minimise the importance of war on account of moral aversion to it. If we were to slur over every aspect or phase of history that we found repellant we should produce curious and unprofitable records indeed. To trace how wars arose, why victory awarded her palms as she did, what were the effects of the conflicts, how far and with what variations they are likely to be reproduced: these tasks I believe to be worthy and necessary occupations of the historian which do not deserve to be slighted.