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EDITORIAL

The War

The war on land, and possibly in the air too, is expected to become more active this spring. The first phase may be considered to have been in existence for about a year. During that period Germany has been engaged in extending the territory under her control and in trying, often with success, to frighten the small nations on her borders. The formal declarations of war last September affected this procedure considerably, but not so much as was expected by many. A second phase may have begun while this is being printed: the spring and autumn issues of the journal seem fated to go to press at a time when major changes in the international situation are in progress or about to take place. Both sides, however, maintain that time is in their favour, and Germany has still a variety of directions in which she may employ her forces to greater immediate profit than in the west. She has used from time to time her normal preliminary methods of threats both verbal and physical so as to remind her weaker neighbours in the Netherlands, Scandinavia and south-eastern Europe of the possibility of at least temporarily unpleasant consequences if they fail to please. In these circumstances it is perhaps not surprising that the smaller neutral countries who have to suffer at the hands of the belligerents should be more inclined to protest at the inconveniences imposed by the Allies, when protests can do no harm and serve at any rate to maintain a feeling of independence, than at the indignities and losses inflicted by Germany, to whom protests would be made in vain and who might seize upon them as a pretext for the commission of further outrages amounting possibly to declared war. It is proper that the Allies should not be driven from the legitimate use of their power at sea as tended to be the case in the last war. And since we are in no position to give immediate and complete protection, we should be as patient as possible with neutrals who remain outwardly friendly with a nation which takes the lives and property of their subjects in complete disregard of humanity and the law.

We should remember that in our own history our traders have often carried on their business with nations against which the armed forces were fighting. The high profits to be made from trading during war, even with such a country as Germany, add considerably to the incentive to maintain friendly relations that is provided by threats of further unpleasantness. Germany is likely to continue to get away with a good deal, and the prospect of neutral countries retaliating by any restriction of supplies to Germany is remote.

This does not mean, however, that the Nazi leaders may not be tempted to present their people with a further easy success, or that they will not try to secure complete possession of resources of iron or oil.

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As far as the war between the Allies and Germany is concerned, the Allies are in the fortunate position of being on the defensive and yet having the initiative. This is the situation which the genius of the Duke of Wellington so successfully brought about in his tactics on the field of battle, and it is one which is supposed to be peculiarly suited to our national characteristics. It is not to be maintained entirely passively, however, and is for that reason not without its dangers. The warnings given by statesmen have been needed. We cannot assume that the war is going to be won without an effort or without a great deal of inconvenience and even hardship. Up to date the chief brunt has fallen on the navy and the coastal command of the Royal Air Froce. The air force as a whole and the army have not been extended. The war has only touched the general populace by imposing a few minor restrictions and dislocations. It would be dangerous to assume that this state of affairs can continue in any sphere. In this country, in particular the victory of the Allies seems to be taken for granted. Such confidence is satisfactory up to a point. The magnificent response from the loyal citizens of British India and from the Indian States shows that many realise the need for effort as well.

It is possible that altogether too much use has been made of the word "defence." In justifying military expenditure when the popularity of disarmament reinforces the disinclination to insure, and for greater comfort to the taxpayer during peace, the

description of the navy, the army and the air force as defence services is not only politic but accurate. The British Empire does not seek to increase its prosperity or area by attacking any other nation. It seeks only to defend its heritage of freedom, the standard of living and culture of its peoples and the development of its subject races. At present, however, what the Empire is determined to defend is threatened by Germany; we are fighting for a cause which is vital to us. A purely defensive attitude would have to be maintained for a very long time at immense cost and would then have no effect. Germany must be defeated and the threat removed. Further we are not fighting this war for ourselves alone, but to restore the independence of the Poles and Czechs and the freedom of the smaller nations and so to establish perhaps a secure and lasting peace. These objectives, too, will not be achieved without the defeat of Germany. Though we may attack at present chiefly with the economic weapon and await attack with our army and air force, we must and certainly shall attack.

It might be advisable to give our defence services some other generic term and to make Lord Chatfield Minister for the co-ordination of attack.

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The navies of Great Britain, the Dominions and France have achieved the object of their attack by driving enemy ships of war or commerce off the surface of the seas almost immediately on the outbreak of war, so that they are now only concerned with the interception of such vessels as may try to get home from the neutral ports where they have sheltered and with the protection of trade against submarines, mines and the occasional surface raider. The navies have been successful in this task. It is unnecessary to quote figures which will have changed by the time they are printed and which are available in the daily press; Germany's submarine losses have been heavy, the sinking of ships in convoy has been reduced to a very small percentage of the total sailings, and the bottling up and ignominious end of the *Graf Spee* are sufficient indications that the life of a surface raider is likely to be either ineffective or short. The submarine seems to be mastered and the mine under very fair control. There will continue to be losses, however. The protection of neutral shipping provides a difficult problem since the acceptance of protection on a large

scale would lead neutrals into further trouble with Germany. Consequently, neutral losses are heavier than Allied ones and there is a possibility that Germany may meet with some success in compelling neutrals to cease trading with the Allies. Germany is undoubtedly building submarines as fast as she can; and crews who can be ordered to sink practically every ship they see irrespective of nationality or type do not need such a high degree of training as those that are required to co-operate with surface warships and to wage war in a civilised manner. Germany has not so far launched a concerted campaign by submarine, aircraft and mine in co-operation. It may be that she has not the means or the determination to do so; but this would be a rash assumption. At sea, we have grounds for satisfaction; but not yet for complacent optimism.

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In the air it seems amply established that both our fighters and bombers are superior in quality to the opposition they have to meet. Fighters have shown that they are able to inflict heavy losses on enemy raiding our coasts. Bombers carrying out reconnaissances and dropping leaflets well over the interior of Germany have been left comparatively unmolested for some reason; but in visits to the Heligoland Bight which have been opposed by the latest type of German fighter in considerable numbers they have proved able to inflict more damage than they receive. As far as quality of machines and pilots are concerned, we are entitled to feel proud. In quantity, the six months breathing space should have enabled us to make good some of the disparity which unfortunately existed at the outbreak of war. The Allied potential for expansion of the aircraft industry was greater than that of Germany which was already working at extreme pressure. Our reserves of pilots and facilities for training with the whole Empire to draw upon should assure the supply of personnel. When Germany decides to make full use of her air force we should be in a good position to meet it and to retaliate if need be against proper objectives.

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The army has been left comparatively unmolested to raise, train and equip the numbers which had been somewhat tardily realised as necessary. The problems of industry and man-power which took so long to co-ordinate in the last war have not been

neglected. It has been realised that forces should not be put into the field until reserves of equipment are ample and supply and administrative services of all kinds are complete. In the administrative field at least the mistakes of the last war are unlikely to be repeated. The Finnish campaign has proved that numbers alone do not win battles; the available man-power is evidently to be disposed so as to satisfy the needs of industry and agriculture. Even so, the numbers available for the fighting forces are formidable. About this time last year the strength of the Territorial Army was raised to 340,000. During the summer 200,000 of the Militia were added to the Regular Army and its reserves. The subsequent calling up of batches of recruits under the National Service Act will have raised the numbers available for Home Defence, in the British Expeditionary Force and under training to above the million mark. This figure should be doubled by the end of the year. An additional reinforcement has come with the contingents from the Dominions, the Canadian division in Great Britain, the Second Australian Imperial Force and the New Zealand troops in the Near East. From these Dominions there will be more to come and India's potential is not yet exhausted. The Empire should thus be able to compete with an extension of front if necessary.

In the west it is evident that the best troops and equipment and a high standard of training will be required. Experience in France has confirmed the evidence of the Polish campaign that the German soldier is an effective fighter. The undoubted shortage of senior non-commissioned officers and officers and the general effect of the leader principle coupled with a deterioration in the educational system in Germany will be to the disadvantage of the present German army as compared with that of 1914. On the other hand there is a better feeling between officer and man than there was then, and the rank and file, though in some cases weedy, are inured to hardship and are fit. Their training has taught them field-craft from youth onwards and they have learnt that the supreme military crime is to be inactive. Reports indicate that the excessive regularity which used to be so evident in 1914—18 is no longer of assistance to the opposite side. How long the present standard can be maintained remains to be seen. The Germans have apparently already begun to use shock troops.

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The New Army

The Armed Forces (Conditions of Service) Act is a comprehensive measure one of whose results was to make the British Army, like the Royal Navy and the Royal Air Force, virtually one large unit. A few members of the Territorial Army who enlisted under the old terms of service before 1933 and have not accepted the full liabilities now undertaken are exceptions. Otherwise, compulsory transfer from corps to corps and posting to any unit within a corps are legal. There is no distinction between the Regular Army, the Territorial Army or the Militia. This is a further step towards the mitigation of the regimental system which has been gradually progressing since 1862. It is described as a step rather than a culmination because in practice distinction between corps with different functions must necessarily remain and because at the end of the war a partial reversion to the regimental system is probably inevitable. That system has done more than anything else to make the British Army what it is. The same results could not have been achieved without it. But its fullest observance is impracticable in war and there have been many officers, principally junior ones, of the opinion that its disadvantages outweigh advantages which could in any case be secured by other means. It is certain that the Royal Navy and the Royal Air Force have each their esprit de corps which inspires the service as a whole without detriment to pride in smaller units or a healthy spirit of competition. A comparison between the methods by which two army units hand over a set of barracks and two ships' companies hand over a ship in the Royal Navy will give an example of one of the failings of the regimental system.

During this war the early disappearance of the distinction between the Territorial and Regular Armies, the rapid expansion and consequent dilution which took place immediately before war was declared, and the breathing space which has meant that the members of the old Regular Army are still in existence will probably cause a bigger change in the mental and social outlook of that service than occurred as a result of the last great war or of the efforts of Mr. Cardwell or any of his successors. The Territorial Army and the Militia will have contributed a number of men in the ranks with intelligence and initiative above that of the normal level of the old Regular Army which itself had been steadily rising. A similar change may take place among the

junior officers owing to the large number of commissions obtained through the ranks and the fact that future commissions will only be obtained in that way. Whether or not compulsory military training becomes permanent, these factors are certain profoundly to affect the structure of the British Army.

The Indian Army was extensively reorganised after the South African War and again after the last war. There does not appear to be any likelihood of changes such as may occur in the British Army. The regimental system cannot even temporarily be abandoned. Fundamental changes are improbable; but the effects of mechanisation, of service abroad, of expanded numbers and of contact with other troops outside India may be considerable.

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India's Contribution

During the last war 621,224 Indian combatants and 474,789 non-combatants served overseas and very large quantities of ammunition, equipment of all kinds, supplies, clothing, textiles, timber and raw materials were provided. By this time twenty-five years ago India had overseas: two cavalry and four infantry divisions, two cavalry and seven infantry brigades, and a mixed force equivalent to a brigade group as well as base and L. of C. troops. In addition, all but nine of the regular British infantry battalions and the bulk of the horse field and heavy artillery had been sent to Europe and replaced by Territorial Force units.

India has not been called upon to the same extent this time. The achievement which even her present contribution represents is brought home, however, by the recently published appropriation accounts for the Defence Services for the year 1938-39. In that year unexpected expenditure on operations in Waziristan and in improving conditions of service entailed a reduction in the amount allotted for reorganisation and re-equipment from Rs. 136 lakhs to an inescapable Rs. 36 lakhs including the diversion of Rs. 80 lakhs from the sinking fund and Defence Reserve Fund towards meeting normal charges. In addition, arbitrary reductions had to be made in the grants for such important items as training and relief moves. All this was in spite of savings resulting from the withdrawal of British units in advance of the modernisation measures which were to compensate for their loss, from the absence of Indian Army units on loan to the Imperial Government and from the fall in the price of foodstuffs.

In presenting his first budget to the Legislative Assembly, the Finance Member was able to refer to the mitigation of the difficulties of his task brought about by the favourable economic conditions in India resulting from the war. Temporary dislocation at the start and a shortage of freight have not seriously interfered with export trade. There is a demand for many articles which India can produce and the Finance Member was able to give the Assembly a list of some of the countries to which war materials have been supplied.

It is quite clear, however, that any probable increase in prosperity is unlikely so to affect the wealth of the country as to enable it to maintain unaided the defence forces on land, at sea and in the air which are required for complete security, or to provide the opportunities for military service that are asked for by the people. This being so the agreement which the Finance Member announced had been reached with His Majesty's Government as to the division between the two Governments of the liability for defence expenditure incurred by India during the war is highly satisfactory. India's liability is as clearly defined as that of any country can be. It amounts to:

(1) The normal net annual cost of defence as represented by the 1939-40 budget estimate after subtracting from it the non-effective charges.

(2) An addition to represent the rise in prices. This will be arrived at by the application of appropriate percentage increases to the relevant heads of the normal budget. It is, of course, a part of the maintenance cost of the normal army in India.

(3) The cost of war measures undertaken by India in her own interest such as: the embodiment of Indian Territorial Force battalions; the employment of portions of the Auxiliary Force (India); port and local naval defence; the establishment of the Volunteer Auxiliary Air Force; additional accommodation for troops and stores and so forth.

In addition, a lump sum of rupees one crore will be contributed towards the maintenance overseas of the external defence troops referred to in the report of the Chatfield Committee. These troops are now part of the garrisons protecting Egypt and

Malaya, and contribute, together with the British, Australian and New Zealand forces, to the security of the overseas trade of India.

The defence budget for 1940-41 is Rs. 53,52 lakhs, the amounts opportioned to the above items being in lakhs of rupees: 36; 77; 2,00 and 6,59 respectively. The balance consists of non-effective charges.

India is thus in a more fortunate position than many neutrals in her ability to limit increases in defence expenditure. Most people will agree with the Finance Member that the settlement is favourable to India and conceived by His Majesty's Government in a generous spirit. In this country we have a large supply of men who are eager for military service, and much of the machinery for maintaining them. The country lacks the money to add substantially to her present commitments or to give much further help in the prosecution of a war which is as vital to her as to the rest of the Empire. There is now a prospect that our surplus resources will not be wasted for this lack of money.

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Waziristan

Expenditure which though classed as abnormal seems to be distressingly regular will again be incurred over operations on the western frontier. These comprise the clean-up of the Ahmedzai salient together with the construction of roads and posts to make the area more accessible, and measures to restore the authority of Government in the settled districts bordering on Waziristan.

The expected cold weather lull in this area failed to materialise and gang activity, sniping, damage to roads, telephone lines and water supplies have continued at the normal scale. The kidnapping of Major Dugal, I.M.S., had a disturbing effect and centred interest on the scattered Shabi Khel of South Waziristan who were responsible. Tribal allowances and lorry contracts were suspended; deposited rifles were forfeited; a somewhat abortive round-up took place in the settled districts; and air proscription was imposed. This made the tribe more recalcitrant at first; but they were unsuccessful in persuading other sections to join them and eventually Major Dugal was released with the aid of Mahsud pressure and without payment of ransom. The Shabi Khel have now made full submission and have repaired some of

the damage that they did to the roads. Their chief bad character, Fazal Din, remains unreconciled and demands heavy compensation for the punishment meted out to his tribe.

Raids into the settled districts accompanied by numerous unpleasant outrages have increased. The majority of these have been directed from the Ahmedzai salient. Air proscription, which has been imposed almost continuously since the inhabitants failed to keep their agreement last spring, has not been sufficient in this very difficult country to stop the activities of gangs of bad characters inspired by the Faqir of Ipi. On the 3rd February, in broad daylight, a military party were ambushed and a M.E.S. officer, a serjeant of the Royal Signals and a M. E. S. messenger were killed. This was only one of a number of affairs of which the local inhabitants from sympathy or fear have given no warning.

Fortunately there now seems a prospect of cleaning up the Ahmedzai salient and restoring morale and government in the settled districts. The attitude of the main tribes remains satisfactory and opposition seems to come only from the worst characters of all sections.

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Finland

The Finnish campaign has shown once again the superiority in battle of good troops well led over mere numbers even though those numbers may also be better equipped with artillery aircraft and tanks. The terrain favoured the Finns; but only because they were skilful enough to take advantage of it. Unfortunately overwhelming numbers prevailed in the end and the Finns were not able to hold out indefinitely without more assistance than had so far reached them. Credits cannot immediately be turned into material and foreign material of varied types requires training in its use. Finland's chief need was for soldiers to relieve tired troops and to form a strategic reserve. Such foreign volunteers as arrived had to be trained and could not be flung straight into battle. There was no route for more regular assistance.

The main objectives for an army invading Finland lie on the fairly open coastal plain on which is the capital and the most populated and industrial areas. The approach from the Russian military base of Leningrad is narrowed at the Karelian isthmus

by Lake Ladoga. The Mannerheim Line was constructed from east to west across this isthmus, the east and centre protected by streams and forests, the western sector more open. Beyond Lake Ladoga and in rear of the Mannerheim Line a railway runs north and slightly east; it supplied lateral communication for the Mannerheim Line and a route to the defenders north of Lake Ladoga. Further to the north-west there is another chain of lakes running north and south and a north-south railway beyond them again. A few lines cross this area from east to west: but the loss of Viipuri threatened the safety of the first lateral railway and would have entailed diversion of supplies to forces on the eastern fronts by long detours. The single Russian railway to Murmansk runs parallel to and some distance from Finland's eastern frontier. Sparse roads lead westwards into Finland through forests. The lack of communications limited the number of Russian troops that could be employed first north of Lake Ladoga as a somewhat distant threat to the flank of the Mannerheim Line, secondly further north against the "wasp waist" formed by the head of the gulf of Bothnia, and thirdly in the extreme north where an open sea and a good road connect the ports of Murmansk and Petsamo.

It was on this eastern frontier that the Finns were able to secure their biggest successes. During December the Russians advanced well across the frontier. Towards the end of the month the Finns counter-attacked, using their superior mobility over difficult snow-bound country to raid the Murmansk railway, cut communications, and surround the bewildered Russians who seem to have advanced blindly without safeguarding their vulnerable lines of supply. During January the Finns continued to drive the Russians back. Opposite the wasp waist one division was apparently surrounded and destroyed. The process was repeated in the area north of Lake Ladoga where a second division was rounded up and a third defeated.

In the extreme north the Russians were able to advance a certain distance and secure the nickel mines at Salmijarvi. The severe conditions of winter have prevented any very active operations in this sector.

In the Karelian isthmus the Finns withdrew slowly according to plan until they reached the Mannerheim Line with which

the Russian forces made contact in the middle of December. From then on the Russians attacked repeatedly with no regard for expenditure of material or loss of life, evidently determined to restore their military reputation before the snows and thaws of spring should hamper operations. The front is only fifty miles from Leningrad and served by two railways. The Russians were able to bring up fresh supplies of men and material in the numbers necessary to make good their very heavy losses. During the latter half of December and the whole of January attacks met with no success. Towards the end of January the ice of the Gulf of Riga began to be strong enough to bear troops and this was a vital factor in the campaign. During February very heavy attacks with formations superior to those that had been used at first and supported by tanks and large quantities of not conspicuously efficient artillery were at length able to gain a footing in the western or easiest sector of the Mannerheim Line. After four weeks of fierce fighting the Russians had advanced twenty miles. Using the ice, they captured Koivisto Island which had enfiladed their attack. This helped them to secure the important railway junction of Viipuri jeopardising the remainder of the Mannerheim Line and the front north of Lake Ladoga.

The Russian air force has been used in the expected manner. Raids all over the country caused considerable dislocation and no doubt interfered with production for the army. Loss of morale and of civil lives, which was doubtless the real object, was negligible. Heavy loss was incurred by the invading aircraft.

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The Balkans

The annual meeting of the Balkan Entente which took place early in February appears to have ended satisfactorily with prospects of increased cohesion between its members but not to the exclusion of other nations of south-eastern Europe. The seven points of the final *communiqué* stressed the desire for peace and co-operation and emphasised economic rather than political agreement. There is to be an economic conference in May. The Balkan Entente, Greece, Rumania, Turkey and Yugoslavia, is superimposed on the geographical group of south-eastern Europe, leaving Hungary and Bulgaria outside. The Entente is based on the maintenance of the status quo against the revisionist claims of the other two

states. Hungary's claims to her ancient frontiers are chiefly at the expense of Rumania. They have been declared in abeyance for the present. Bulgaria's demands are for the southern Dobrudja at the expense of Rumania and an outlet to the Aegean Sea at the expense of Greece. Further complications are introduced by the fact that the "peace front" states of Greece, Rumania and Turkey, enjoying Anglo-French guarantees, are further superimposed on the Balkan Entente leaving out Yugoslavia, a state so placed as to be particularly susceptible to suggestions or threats from the totalitarian powers and therefore anxious to avoid any of the complications of alliances or guarantees. This latter situation led, before the outbreak of war, to tentative movement towards a southern Slav *rapprochement* between Yugoslavia and Bulgaria which caused some misgivings among the other members of the Balkan Entente. Since then the attitude of Yugoslavia in encouraging a reconciliation between Hungary and Rumania has allayed suspicion.

The fact that Italy has a footing as well as an interest in south-eastern Europe has been a source of anxiety to Greece. Italy has shown herself concerned to reduce possible causes of dispute in that area, evidently with a view to stiffening any resistance that it may be necessary to offer to Russia. It is expected that she would strongly oppose the formation of a *bloc*. Fears were felt that an extension of the Balkan Entente by pacts of mutual assistance or otherwise might lead to an immediate descent on Salonika. Considerable speculation attended the conversations between Count Ciano and Count Csaky early in January. *Communiqués* announced the customary unanimity of views, and Italy later stated that she would go to Hungary's aid in the event of a Soviet attack. Italian influence seems in some ways to have reinforced the effect on Hungary of the presence of Russia on her northern frontier and to have led to the reassurance to Rumania on the subject of revisionist claims. At any rate previous suggesions that Bessarabia might more readily be yielded than Transylvania were sharply dispelled by King Carol. This was probably due as much to the lack of Russian success in Finland as to Hungarian reconciliation. Russian lack of success has raised the morale of south-eastern Europe generally. It has also dampened pan-Slav enthusiasm in Bulgaria. If the effect is confined to this and not extended to generate unwarranted optimism, it will be good.

Rumania's problems are the most pressing. Territorial claims from three directions have added to them the potential threat to Rumanian integrity resulting from the possession of surplus resources of oil. At the end of January the Rumanian Government assumed control of the oil industry. Prominence was at the same time given to German dissatisfaction with the quantities of Rumanian oil being delivered, at the shortage of rolling stock and at the failure to implement the agreement of March, 1939 which would have given German capital an increased control of the industry. Rumours of troop movements in the neighbourhood of Lwow (which have been heard again since) increased the general state of nerves.

Rumania has explained that the assumption of control over the oil industry has no ulterior significance. It has merely been done in an effort to find the million and a half tons of oil that she has agreed to supply to Germany without encroaching on the output of companies operating with Allied capital. No unneutral policy is intended. Rumania is faced with the possibility that, if Germany cannot get delivery of the oil she requires, which may not be easy in the face of Allied competition, she may come and take it undeterred by any difficulty in transporting it to the west where it is required. It is hardly surprising therefore that Rumania views the removal of winter obstacles to movement with apprehension and is mobilising her forces. In these circumstances continued harmony in the Balkans is very desirable. It would be well if the *status quo* states did not rely too greatly on the correct manner in which, for example, Bulgaria has so far pressed her claims. Voluntary concessions might be advisable.

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The U.S.A.

The visits of Mr. Sumner Welles to European capitals are unlikely to have achieved much more than similar journeys made by United States representatives during the last great war. With another presidential election approaching, the suspicion arises that most moves of this nature are made with a view to their effect on voters. Americans may feel that a good way to avoid being drawn into the war is to stop it, and that it is always worth trying.

There are those who say that in this war, as in the last, the United States of America have abandoned their neutrality by

trading freely with the Allies: by doing so their people make plain their hostility to Germany and their sympathy with Germany's enemies. The impression is increased by the general attitude of the Administration. There are certain points to be borne in mind, however. In America the federal government has a less compact public behind it than in most nations, and one considerably less likely to take its tone from the central executive with which it is often strongly at variance. Official indications of opinion may not be endorsed by even a majority of the people. Sympathy with the Allies is probably due more to dislike of Germany than to active liking for the Allies. Resentment over the conduct of the blockade is less probable now that American ships are forbidden to enter belligerent waters; but American ships are still liable to be stopped in areas where they are allowed to move, and censorship of mails and other small but no doubt irritating matters such as the failure to release news have led to complaints. Too much should not be assumed from the fact that the United States are supplying aircraft and other warlike articles to the Allies. They would supply them to Germany as well if they could get them there and obtain payment, and in fact they are probably carrying on a restricted trade with Germany at the moment if one can judge by the marked increase in exports to Italy and the Scandinavian countries since the outbreak of war. The powerful incentive to continue a profitable trade already referred to above is unlikely to be checked in the United States either by the government or by public opinion. American merchants are not alone in their determination to trade irrespective of artificial restrictions; but they are probably more successful in ignoring them. Colonial merchants, it must be remembered, continued to conduct a profitable trade with the French during the Seven Years' War. During the Revolutionary War influential patriots continued to import from England, and the British in Philadelphia found it easy to buy supplies with their gold while Washington's army was almost starving at Valley Forge. During the War of 1812 a regular trade was carried on with England under a system of bogus privateering, and the army in Canada relied on American contractors for a considerable proportion of its supplies. Finally, the national conscience, the sinking of the *Panay,* the bombing of civilians and humiliation of American citizens has not interrupted the supply of aircraft and other essential war supplies to the Japanese.

In view of this the neutrality legislation passed since the declaration of war, which both opens American markets to the Allies and reduces the risks of bad feeling over the interruption of trade to Germany, is most satisfactory. There is no doubt also that the majority of the American people desire to see Nazism defeated and view the assistance rendered to the Allies with moral approval as well as material satisfaction at the profits made. There does not appear to be the slightest likelihood of the United States entering the war, and the overwhelming wish of the people to keep out of all such entanglements is stronger even than it was twenty-five years ago. There are some, however, who doubt whether America can or even should keep out of the war while the very ferocity of the opposition to any such suggestion indicates that entry is regarded as a possibility. The United States can hardly be said to have entered the last war voluntarily: they were practically forced into it by Germany, in fact by what amounted to an ultimatum.

Only similar circumstances, it is believed, could bring them in again.

HOW TO PLAN AND HOW TO ORDER

By "Auspex"

These notes in no way complete the subject: they only form a sort of structure on which one may readily produce a plan. They are written in an attempt to simplify a difficulty for the newly joined officer.

* * * *

Designing the Technique on Which to Plan

This is a stage in planning that we do not recognise and a most essential stage. If the reader will consider the different techniques employed recently by the German army against Poland and now against the Allies on the Western front, he will realise that, apart from actual planning, the general technique that a commander decides to employ against his enemy must form a sure foundation on which to build his plans of battle. Without such a technique before him he is at a loss to plan and his commanders are at a loss as to how to implement his plans. We have hitherto neglected this important stage.

In the first place, we know that it is the nature of the ground, or country, the nature of our weapons and the nature of our enemy which determine the type of tactics (there are other factors which influence the actual method or plan to be used from time to time) that we will employ. A true soldier can assess the particular technique, or perhaps one should say, can invent the particular technique, of fighting which will get the very best use from the first two factors, and take full advantage of the particular weakness of the third—the enemy—and so destroy him.

Here is a simple example from the N. E. Frontier of India on a hypothetical occasion.

Enemy.—Savage; armed with old tower muskets: too superstitious to be about at night: habit of occupying stockades to oppose our advance on main paths.

Our weapons.—Rifles.

Ground.—Hilly, with thick forest and many minor tracks.

Deductions

(*i*) The enemy's habits invited us to move away from the main tracks, and to move by night, if he were likely to spot daylight movement.

(*ii*) Our weapons were not such as to be able to root the enemy out from behind his stockades.

(*iii*) The ground gave concealment, so ambushes were indicated.

Technique decided upon.—To move, preferably by night, on minor tracks or through the jungle, discover his stockades and sit in ambush over them till the enemy occupied them in order to oppose the force that he expected on the main track.

That is an example of a soldier's mind picking out the useful considerations to decide for him his "technique." From that technique he reasons out the actual methods, or plan, that he will employ in a particular situation.

Thus from all this, we see that before we can plan we must get our minds perfectly clear as to the technique which we intend to adopt in order to get the best from the ground, the best from our weapons and to give the enemy the worst—"the muddy end." By a proper technique, nearly every disadvantage can be turned to an advantage, our planning becomes more simple, and those working for us have a guide as to the way in which to implement our plans.

Let us look at one example of a really bad technique, which led to bad planning or even to complete lack of planning. In Mesopotamia, during the efforts to relieve Kut in early 1916, we had the following factors before us:

Ground.—Flat, with liquorice bushes about knee-high.

Our weapons.—Rifles and a few medium machine-guns. Very little artillery.

Enemy.—Discipline not too good: armed as we were: no wire obstacles in front of positions: staunch in defence.

The technique we usually employed was to advance by day over the flat country, in successive lines of infantry, under our so-called artillery support, to deliver a frontal attack. Whatever plans were made were, with few exceptions, based on this technique. The attack on Dujailah in March, 1916, started out on a good technique, that of a night movement across the desert, right out to the enemy's flanks. Had this technique continued to rule the plan and a night attack been made on the Turkish position, then we would have broken through it and either overrun or turned the strong redoubts of Dujailah and Sinn Abtar, while our cavalry passed through to hold off the Turkish reserves till we could later attack and smash them. But we went back to our old, bad way and waited for daylight and our pathetically few

guns before we attacked and were heavily thrown back by fresh reserves which had come into the redoubts.

In order that technique may be good it must be susceptible to change as conditions change. In fact, to vary one's technique within the limits set by the factors we have mentioned—country, weapons, enemy—is one way of beating one's enemy and of producing variety in planning.

The planning and fighting of a battle is an art. An artist is always ready to vary his technique in accordance with new inventions in colours, brushes, canvas, in order to produce a better picture. The soldier must be ready in the same way to change his technique. It is vital in these days of scientific development and swift movement. It is economical to change one's technique in good time so as to have a surprise in method ready for the enemy.

A Method of Approach to a Tactical Problem

There is one almost infallible approach to a tactical problem and that is to ask oneself:

"How can I give this fellow the biggest surprise of his life?"

We have discussed technique, which is the structure on which our plan rests and which maintains it throughout its course in action.

We will confine ourselves here to the assessing of the problem, for it is first of all important that we should get into the habit of isolating our problem. Once we have found it and isolated it, we can deal with it. We start by asking ourselves the question above: that embarks us on an objective search for our problem and narrows down that search.

If you wish to invest your money you will set out to get all possible information which may have a bearing on the matter and which will finally guide you to a proper selection of the best investment *for your present purpose*. In those last four words is your problem and, before you start your investigation at all, you will isolate that problem and state it quite clearly in your own mind. Is your purpose, your problem, to find a reasonable speculation or is it to find a good investment, or only a gilt-edged investment? Before you waste your time in investigating the pages of financial papers, and talking to stock-brokers, you will have made this first search in your own affairs to determine the problem that you are to pose to yourself and your broker. We must also get into the habit of isolating our military problem.

The military problem is more difficult to isolate than other problems for we do not spend most of our private lives in facing these problems as we face the problems that concern our money or our housing or our feeding. Military problems are foreign to us. However, we approach a financial problem with the one question in our mind, "How can I make more money?", a feeding problem, "How can I get enough of the right sort of food to eat?" These are approaches that are habitual to us and they help us in stating our problem.

Thus, "How can I give this fellow the biggest surprise of his life?" will help you in stating your problem and will place before you the object you are to attain. A modest section commander in the defence, though limited by the battalion, company and platoon plan, will very soon narrow his problem down to, "Am I to site my trench here or there?" If he has first asked himself the original vital question. Having decided on the exact siting of his trench, he will consider how best his section can act so as to deceive and surprise a reconnoitring or attacking enemy.

Making a Plan

The first essential in planning is the attitude of mind brought to the task by a commander. Pugnacity, guile, a balanced estimate of his enemy's mind, courage to gamble, knowledge of his assets, will to do damage. First and foremost is offensiveness, in the fullest sense, and secondly, courage and guile.

Napoleon, whom we seem to quote very often, once said, "In war the simplest operations are the best, and the secret of success lies in simple manœuvres and in taking measures to secure against surprise."

We have spoken of "technique;" we have shown that the adoption of a good technique gives us the basis on which to plan, for it keeps our minds on the few important things that matter.

There are many reasons for the vital necessity of making a simple plan which permits of simple manœuvres to implement it. Here are some of them:

We have already said that all our plans must be designed to surprising the enemy. The simple operation will have a simple plan behind it but it will be a cunning plan.

It is very seldom that all information will be at our disposal, for the enemy will try to hide his doings and intentions from us as much as we hide ours from him. If our plan is simple and fresh information comes to hand, it will not be so difficult to

modify or alter the plan as it would be were it complex. An army is a very complicated machine in any case and even a simple plan leads to much detailed arrangement; a complex plan is exceedingly difficult for a staff to implement and, if any untoward circstance occurs, then the whole detailed work may easily be thrown out of gear and there be no way of getting it going again.

A good plan, on the other hand, should leave a considerable margin for the unexpected, that which we cannot have foreseen. Obviously, it is usually far easier to make a simple plan if we have the initiative, for we intend then, from the start, to make the enemy conform to our will. His own intentions are not of such importance to us. If we have not the initiative, if we are on the defensive and are "dancing to his tune," then we have to divine his every intention, if we possibly can, so that we can forestall it. It is then that a weak or ignorant commander may produce complicated plans in order to counter every possible hostile move. A good commander will see the one or two dangerous possibilities and provide for them.

Actually, for a commander, it is more difficult to make a simple plan than to make a complex one, just as it is far easier for the draughtsman to draw the details of a new sort of machine than it is for the designer to decide and work out what sort of a new machine is needed for a particular purpose, and to order the draughtsman to draw it. The designer has had to pick out the one great need in the problem from among a thousand conflicting smaller needs and bits of information. Having selected the one great need, he sets it before him as his object and makes his outline plan to obtain it.

Those of us who do not waste our time do this every day of our lives.

But to make a really effective plan, we must be free to act; we must not be jammed tight up against an enemy's defences with our mobile reserves so close that they too are half involved in the battle before they start to move. "The art of war," said Xenophon, "is the art of keeping one's own freedom of action." That is, of holding the initiative against our enemy. To-day "freedom of action" is needed as far back as hostile aircraft or other forces may penetrate to interfere with our plan.

Having made a clear and simple plan we keep our object—the end we must attain—before us and, as our plan works through during the operation, we take every difficulty that arises and overcome it or turn it towards the attainment of our object. An

example of this is the crushing attack by the Crown Prince's Army in France in 1918 resulting in the Germans driving a salient into our front which might well have soon spread out to north and south and so led to the rout of the Allies. The situation of our armies was desperate, but Foch turned the German advantage to his own account, by attacking the flanks of the salient, forcing the German withdrawal from it and then, by blow after blow, keeping the battle fluid and at last developing the whole of the northern sector of the Western front into a series of manœuvre battles, with his own forces on the offensive. Foch was clear as to his ultimate object and so had his plans clear before him.

This does not mean that a completely altered situation will not cause us to alter our object. Nor must we blindly and obstinately stick to our plan if we find we can better achieve our object by changing that plan. On the other hand we must not be like the lost soul in the Tibetan story, wandering over the world with no fixed purpose. He saw a lake in the East and, being thirsty, hurried there. When near the shore he smelt smoke and bethought himself that hot tea and a shelter for the night would be better, so he turned North towards the smoke. On his way, before he reached the smoke, menacing phantoms leapt up before him. In terror he ran for his life towards the South; tired, he stopped to rest. Other wanderers passed and told him of a land of milk and honey for which they were bound, so he joined the party and went Westwards, only to be tempted again and again from his object.

Orders

In the war of 1914—18, and for years after it, we passed through a phase in which all orders had to be in a set form and in greatest detail. This led to a most sterile period in real military thought, for the correctness of the form of the order and its completeness were considered by our trainers to be of far more moment than the astuteness of the plan that gave birth to the orders. In other words, planning had become the slave of staff duties. We must keep these two things in their right place. Planning is the master of staff duties and we must never again allow staff duties to rule our planning.

There will always be the danger in a great war of assuming that no one is sufficiently trained to carry out his duties unless he has the most meticulous orders in his pocket. We must at

all costs avoid this: it is paralysing. We must aim for simplicity and for teaching the personnel of our expanding armies to think in a military way. It is vital to us to do this, for although we may be engaged in an intensive struggle where weapons and men are moved and operated in masses, yet that struggle may at any moment deteriorate into a battle of manœuvre, into extensive fighting. Moreover, there will always be, right at the very front even of the most powerful positions, an area in which lower commanders are exercising all their wits and activity to pierce the enemy's screen and to gain better points for observation or defence, or to capture prisoners for identification. Patrolling and raiding will be constant.

In extensive fighting—and it is this form of warfare which we study more than any other—junior leaders are far from their superiors: their superiors are often out of touch with the latest developments where their subordinates are operating. It is then that simple, wide directions, putting the subordinate into his commander's mind, essentially into his policy rather than into his actual plan, into his hopes and fears,—these directions will enable a thinking subordinate to act.

The subordinate must have what Foch calls "Intellectual Discipline." He says:

"To obey is difficult in war. For one has to obey in presence of the enemy and in spite of the enemy: amidst danger; amidst various and unforeseen circumstances; in face of a threatening unknown; under a physical strain, moreover, due to many causes."

We must be careful not to paralyse the initiative and to ruin the ability to think, of our leaders by tying them down too strictly and too completely with detailed orders which can never envisage all possible circumstances; which will not smash up the enemy's last anti-tank nest that may ruin our attack unless the junior leader on the spot can think and act against that nest.

So we must read and follow in the proper spirit the explicit instructions for the compiling of orders; that is, knowing that these orders are only the medium by which the good plan is conveyed to the troops and that they are more likely to get there in time, to be read, to be understood and to succeed, if they are short and if they leave enough initiative to those below in case of the unexpected suddenly occurring. They are a part of the mechanics of fighting.

In very intensive fighting such as we may yet get against a civilised, highly-equipped enemy, we may have once more to go, for a time, to careful, full, detailed orders for certain of our operations, especially if our armies suffer great losses and our replacements are ill-trained as they were in the Great War, and not only ours but those of France and Germany also. We must regard them as a grim but temporary necessity and still train ourselves to write the very difficult short "directive" which will guide a leader through a phase when distant from his superiors where events cannot be fully foreseen.

SURPRISE

By "Hyderabadi"

In the course of one of his enchanting and so very sensible essays the late Mr. G. K. Chesterton discoursed on the subject of colours, in particular of white. So many people, he claimed, looked upon white as an *absence of colour* and not in itself a colour at all. Mr. Chesterton went on to write as follows:

"The chief assertion of religious morality is that white *is* a colour. Virtue is not the absence of vices or the avoidance of moral danger; virtue is a vivid and separate thing, like pain or a particular smell. Mercy does not mean not being cruel . . . . Chastity does not mean abstention from sexual wrong; it means something flaming like Joan of Arc. In a word, God paints in many colours; but He never paints so gorgeously as when He paints in white."

Adapting Mr. Chesterton's way of putting it to another subject let it be said that the principle of surprise does not mean merely an avoidance of giving away secrets.

Surprise is a *positive* thing, a weapon to be wielded as thoughtfully and energetically as a body of troops or formation of tanks. It is indeed the greatest weapon of them all. If an enemy were surprised completely enough, a few street Arabs armed with carving knives could defeat a battalion of well-trained, well-armed troops by slitting their throats as in false confidence they lay asleep.

Surprise is closely connected with information, the acquisition of which is one of the greatest problems facing a commander in war. Information has two separate aspects: first, the information of the enemy's plans, movements, numbers, disposition, etc., that a commander needs to gain in order to be able to devise his own plans. Secondly, the information about a commander's intentions, etc., that his enemy will try to obtain and which must either be withheld or allowed to reach the enemy in a form that will deceive him.

To observe effective secrecy about one's own plans merely brings about negative surprise; to make an enemy accept false information as true brings about positive surprise, a far greater thing.

Consequently, the first essential in a commander's plan of action must be a bold and cunning provision for conveying false impressions to his enemy. He must, in short, make a definite "surprise plan," apart from the plan he makes to execute his real intentions. The more completely he hoodwinks his enemy the more simple may his real plan be. Indeed, if he hoodwinked his enemy sufficiently his real plan might even be silly and yet succeed.

It is a comparatively simple matter to ensure secrecy about one's own intentions. At the worst it can be done by merely not mentioning those intentions until the last possible moment, and thus surprising everybody. But to work out a *false* plan and to get it known in time to the enemy—not by means of such obvious ruses that he is led to doubt its genuineness—demands very careful preparation and staging. It even demands a certain degree of histrionic ability on the part of all members of the force concerned.

It follows, therefore, that one staff should not be saddled with both tasks; with preparing a real plan, with all its many tactical and administrative complications, and at the same time with preparing a convincing false plan. The latter task should be allotted to a separate staff, led by a man of ingenuity, with something of the practical joker in his mentality.

This staff of "jokers" should be allowed considerable licence and must be given loyal and active support—not merely toleration—by all ranks. Its main task will be the dissemination of false information among the enemy, to do which it will have to rely considerably on all members of a force playing their parts. Prisoners taken by the enemy, for example, must be primed to let slip important details of "preparations" behind their own lines. Misleading messages and orders must be allowed somehow to fall into the hands of the enemy. And so on. Yet all must be done cleverly or the enemy will wonder rightly whether "it isn't all too good to be true."

It must be remembered that practically all tactics in war are devised very largely for the purpose of making a force in itself, or an operation in progress, proof against the unexpected and the unknown. For instance, an army holds a long line of front at great expense in men and material; yet it is never expected that the enemy may attack simultaneously at every part of that front. The point is it can never be known for certain that the enemy will *not* attack any particular sector, consequently one must be on

guard everywhere—forward, in rear, and to the flanks. Similarly, an attack is supported by reserves, largely in case anything goes wrong.

If a commander could ever have *certain* knowledge that a particular sector of his front was not going to be molested by the enemy it would be unnecessary for him to hold that sector. But, of course, in actual practice no commander can ever have certain knowledge of this description.

It is because of the "semi-foolproof" nature of tactics in modern warfare that operations of war, particularly in the case of offensive operations, become so costly, so slow, and so limited in their results. It is highly important, therefore, that every possible endeavour be made to induce the enemy to abandon, or at least to relax in, his "foolproof" methods, and to commit himself to a course of action with a single object in view. This can only be hoped for if the enemy is supplied with false information so convincing that he really believes he has the day in his hands and becomes of a mind to take risks. It is clear, therefore, that a "surprise plan" must be framed to induce the enemy to *act*, and to act in accordance with one's own wishes. It is not enough merely to forewarn him against something that is not actually going to happen to him. He must be made to deduce out of the false information he receives a golden opportunity for himself.

The writer does not imagine that he is describing in this article any new interpretation of the principle of surprise. History teems with examples of deliberately planned positive surprise being inflicted on an enemy, and doubtless in this present war surprise measures are being constantly planned and put into execution. There is a considerable difference, however, between the famous commanders of History and of to-day and the ordinary plodding junior commander. One of the characteristics of the latter is his inheritance, through training and custom, of what is called the military mind. The "military mind" is, above all, orderly, methodical and standardised. These characteristics are in themselves admirable for a soldier, and a very great deal depends both in war and peace on their being present. But any quality can be pushed too far, and unless counteracted in some way the above-mentioned qualities of the military mind overwhelm the quality of *ingenuity* that should also be present.

The proper counteraction is obviously training; that is to say, specific training in the art of surprise. If surprise were recognised as a weapon, training in its use would be a regular

item of a soldier's education, but it is not at present generally so regarded, at any rate as a weapon for junior commanders (battalion commanders and below). If looked upon as a form of weapon at all by these junior commanders it is thought of as one above their reach, like tanks and aeroplanes, only to be employed by "higher authority."

The "military mind" is not noticeably susceptible to ideas whose tendency would be to disturb it, but on the other hand it is not *impossible* for it to adapt itself to new ideas. For instance, the new drill and the new idea in field formations generally seem at first somewhat untidy, but they are now enthusiastically supported. And quite recently the writer overheard a senior officer of the old school exclaim, while watching a frontier warfare demonstration at Razmak, "what a glorious, well-ordered, confusion!" as he saw *ex* piquets and mountain artillery sub-units elbowing their way at the double through the main body in order to catch up with their units. And that officer's description was most apt. It was a confusion; it was well-ordered, in that everyone knew exactly what he had to do; and it was therefore glorious. But it was, all the same, untidy. This officer had evidently overcome at least a little of his horror of untidiness.

During the course of his career the writer has made countless military plans, on operations, on field exercises, on T.E. W.Ts. and at promotion examinations, but never once has he been required or expected to devise any deliberate surprise measures. He has on the contrary constantly been advised to keep his plan simple, which means avoiding surprise unless, as is advocated in the article, two separate plans are made, one genuine, one false.

It must never be imagined that the making of a surprise plan simultaneously with a genuine plan is the prerogative of higher formations only. It should be an integral feature of all plans. Material preparations will be necessary, and it must not be thought that the "putting across" of a "surprise plan" will always be a safe business. Losses in men and material in "spoof" operations may, however, be well worth while, and may contribute materially towards success in the genuine task to be performed.

To express the matter succinctly in journalese, it is incumbent upon all ranks to become "surprise-conscious." There are, however, pitfalls for the unwary into which they may fall despite a high degree of this "surprise-consciousness." They must never imagine that an opponent is a bloody fool, and must never fail to keep uppermost in mind the *positive* aspect of surprise. So

many surprise measures are planned with a view merely of keeping the enemy *in ignorance*. This is purely negative. Negative surprise has undoubtedly its value, but it is a low form of the art.

Two striking examples of this may be quoted. Firstly, there is the recent forbidding of the practice of cleaning the brass-work of the soldier's equipment, the motive for which order was presumably to render forces in the field less visible to the eye of the enemy. But need, one wonders, the brasses of *all* soldiers be made so inconspicuous? If an enemy cannot see troops that he has reason to suspect may be near him, he will equip himself with stronger field glasses—or take other suitable measures—until he can. On the other hand, if half a battalion wore dulled brasses and the brasses of the remainder twinkled gaily in the sun, there would be at least a hope that the enemy would estimate the strength of the battalion as half what it really was.

Again, there is the practice of despatching patrols of troops by lorry on frontier roads in order to deal with marauders. Mobile patrols of this kind are ordered out presumably in order to deter marauders from making forays on or near roads so guarded, since they (the marauders) are expected never to know where or when they will meet armed opposition. Thus these patrols are usually intended to be a form of surprise. Such surprise is, of course, purely negative even if successful, but what actually happens as a rule is that the marauder stays his hand at marauding and "lies up" for the patrol. When he does, the surprise is usually one-sided and the reverse of what was planned.

Such patrols are indeed, in the view of the writer, only admissible if the patrol wishes to "trail its coat" and is resigned to suffering casualties. This was often the case with the Black-and-Tans in Ireland in the troubled times between 1919 and 1922, but it certainly is not true of troops operating on roads within British administered territory in the North-West Frontier Province to-day.

What it amounts to is that no man in his senses allows himself to remain in ignorance when matters of life and death are concerned. He takes active steps to obtain information—and gain information of some sort he surely will. If he is an enemy and is to be deceived, let it be *false* information that he gains, let his mind be stuffed with lies, let him pat himself on the back with ill-founded glee, and let him as gleefully work out and execute a plan of action that can only (did he but know it) make him as "stubble to our swords."

That is surprise. It is the greatest, most paralysing, most disaster-inflicting weapon the world knows and has ever known. There is even tragedy in its terrible completeness.

It alone can win against immeasurable odds.

MOBILE FORCES

By Zarif

The main outlines of Darwin's Theory of the Origin of Species are well-known to everybody. It is equally well-known that there are still people who deny that they are an improved design of original monkey. Perhaps they are right: perhaps in their case there has been no improvement. Yet the history of all evolution is a story of adaptation to circumstances, an overcoming of obstacles, the survival of the fittest. It is hoped to show in this article that the armoured fighting vehicle, the aeroplane, and the other component parts of the modern mobile force are not a new invention which has been created like a monster to devour civilisation, but that they are the natural result of the evolution of the horseman of some thousands of years ago.

It is hoped, too, to analyse the modern mobile force, so that we can with a critical eye gauge the value of our own and of foreign organisations.

The story of this evolution runs in a series of cycles. The mobile force gained the upper hand by its mobility, and was met by missiles; the answer to missiles was armour, but armour reduced mobility until the mobile force was no longer relatively mobile. Then obstacles again stopped mobility; until a means was found of overcoming an obstacle, the mobile force was again unable to be mobile.

How did it all start? And where will it end?

The Medes were the first people to have the idea which was epitomised by General Forrest in his definition of strategy; "Getting there fust with the most men." In 1100 B.C. they put their soldiers on horseback to gain greater mobility than their opponents who walked on their flat feet. And that was three thousand years ago. The idea was most successful at first, but in about 645 B.C. the Medes were defeated by the Assyrians, and it was thought high time to reorganise the army.

Cyaxares got the credit for this, just as Messrs. Cardwell, Brodrick and Hore-Belisha were credited later for their Army Reforms. Cyaxares armed his cavalry with a bow and used them

to gallop round the Assyrian infantry, loosing off ceaseless streams of arrows, to which the Assyrians, unskilled in aiming off for movement, could make no reply. All went well for about a hundred years, and then the Median cavalry met its first obstacle. Cyrus, King of Persia, employed camels to frighten the horses. Dig in their heels as they would, those Medes could not get their horses to pass those camels. So they had to dismount, or were dismounted involuntarily, and fought on foot; and they were handsomely defeated.

As far back as that, then, we see that pure mobility has the advantage over troops which are less mobile; but in order to retain this advantage, mobile troops must retain their mobility.

In B.C. 326 Alexander the Great's victorious army, whose morale can only be compared to that of Napoleon's Old Guard, reached the river Jhelum, where an Indian gentleman, called Porus, opposed his crossing. Not only was the Jhelum in flood at the time, but Porus had two hundred elephants in his order of battle. Alexander thus had a double obstacle in front of him. By a series of deceptions very similar to those used by Napoleon to force a crossing of the river Mincio at Borghetto in 1796, Alexander moved his force seventeen miles upstream and managed to get five thousand cavalry and six thousand infantry across the Jhelum. He advanced towards Porus' army, and found that twenty thousand infantry had been drawn up with two hundred elephants in front of them at one hundred-yard intervals. On the flanks were about three thousand cavalry and three hundred chariots. It was an imposing array, and it must be admitted that a lesser man than Alexander might well have considered it wiser to turn back and fish for mahseer at Tangrot.

However, Alexander appreciated the situation and made a plan. He sent off half his cavalry round the left flank well away out of sight. He himself charged the enemy's cavalry on his right flank, which induced the enemy cavalry on the other flank to come to their assistance. The other half of Alexander's cavalry, which he had sent round the left flank, then came in, charged the unprotected enemy infantry and went on to attack the enemy cavalry, which now had to face two ways at once—always an unenviable position for any soldier, though some politicians seem to like it.

The bulk of Alexander's force now attacked the enemy and routed them.

This is an example of mobile forces being used to destroy the mobile forces of the enemy, and of breaking the crust of the defence for the less mobile infantry to push through.

The Parthians, in about 53 B.C., had an interesting innovation. They introduced both heavy and light cavalry. The light cavalry was very mobile; it was unarmoured and capable of shooting arrows when moving at full speed. This had a most devastating effect upon the enemy who were not only getting (like King Harold) eyefulls of arrows, but were also subjected to the nerve-wracking test of standing up to a cavalry charge.

Our present-day tanks do the same; but the Germans, either from obtuseness or inefficiency, believe in standing stock-still to fire a round, as our anti-tank gunners will find to their great delight when the time comes.

The heavy cavalry of the Parthians was armoured, and used for shock action. Parthian tactics were to reconnoitre and discover the enemy's flanks with the light cavalry, whose subsequent task was to lure the enemy cavalry after them. The heavy cavalry would then engage the unsupported enemy cavalry, and go on to destroy the unprotected enemy infantry.

Passing quickly through the centuries, we come to the beginning of the XIVth century, when the system of forming infantry into squares was evolved.

Infantry in squares! The cavalry were most indignant. The infantry would not run, as they had always run before, and the cavalry could not break the squares. What was to be done?

Someone had the idea of bringing up archers behind the cavalry, and the archers poured such a deadly fire into the squares that the squares gave way in places and, the obstacle being broken, the cavalry charged in, and the infantry ran again.

There were occasions, too, when the cavalry raced for a tactical position and, on account of their mibility, arrived before the enemy. Cavalry being unable to hold ground while still sitting on their horses, they used to dismount and form an obstacle of lances. Provided that they took some archers with them, they were normally able to hold that position until their main body came up from behind to relieve them.

This is a most important point. Here we find mobile troops holding ground by dismounting behind obstacles; and we also see the need for "artillery" with mounted troops. Without their archers, the mobile troops could neither break through an obstacle nor defend an obstacle against determined attack.

Owing to the improvement in archery and projectiles in general, armour became heavier and heavier; the cavalry, through sheer avoirdupois, became proportionately less mobile. By the beginning of the XVth century, the improvement in archer "artillery" had reached a stage when even armoured cavalry could no longer hold the field against it. Even the heaviest armour that could be carried on a horse was not proof against those tremendous arrows.

Then came the pike. The infantry, with the pike in front of them and the heavy archers shooting arrows from behind them, enjoyed an immunity which had never before been known, and the role of cavalry was practically confined to pursuit.

Finally the invention of firearms gave the cavalry of this period the last push down the hill. To protect themselves sufficiently against bullets, the cavalry had to make armour so heavy that even the stoutest horse could not drag one foot after another. Mobility was lost. Another cycle had ended.

During the period 1476 to 1796, the infantry became the main arm of the battle.

The cavalry, however, threw away their armour and became mobile once more. They were used for reconnaissance, raids, flanking movements, counter-attack and pursuit. They had found a position on the battlefield as the arm of opportunity. Their whole success depended upon their being what Lord Allenby called "sudden, rapid, and opportune." They relied on speed. They operated from a secure base of solid infantry and guns. Where they could work to advantage, they worked swiftly, and they were usually successful.

But they had recaptured their right to a place on the battlefield by *regaining their mobility*. They had ceased to be the *main army*, but had become the *mobile portion of the main army* —that is to say, mobile *relative* to the slow-moving infantry.

The next general period in the history of the evolution of mobile forces is from 1796 to 1871. In general, the period shows a decline of European cavalry.

Forty years before the period begins, the cavalry of Frederick the Great had dominated the battlefield. Frederick understood the principles of mobile troops, and he applied them by adopting an organisation which enabled his cavalry to fufil their roles in the conditions which prevailed at the time. About this time, the increasing power of infantry firearms began to cause a fundamental change in the character of war. The changes affected the cavalry in particular; but cavalry leaders did not appreciate the implications of the changing conditions, so cavalry began to fall into disrepute, and was considered antiquated.

"Considered antiquated." And yet, how "modern" and "up-to-date" people have thought themselves to be when they said that the cavalry of 1930 was antiquated! People were thinking that before 1796! The moderns who dubbed cavalry antiquated in 1930, and who boasted of the new invention of mechanised infantry, did not know their history. They did not know that the mechanical transportation of troops, which they claimed would revolutionise war, was practised by John Ziska, the blind Hussite, in 1420 A.D., when he carried his infantry into battle in farm carts. And the cavalrymen of 1930 who took such umbrage at cavalry being called antiquated could not see that it was they, the cavalry leaders, who were antiquated! They lived by tradition and not by principles.

Napoleon was an exception to this rule, and he made a better use of his cavalry; but even he used them wrongly at Waterloo, and cavalry once again sank to the depths of disrepute. By the middle of the XIXth century, the climax of incompetency was reached in the employment of cavalry, and the charge of the Light Brigade in the Crimean War evoked the very true remark that it was "magnificent, but it was not war." It was not until the teaching of Moltke in Germany, and also the lessons of the American Civil War, began to be appreciated, that cavalry thought in Europe once again assumed a more practical aspect.

The meagre record of cavalry during this period was due to the failure of cavalry to keep abreast of the changing conditions of war. Fire had become the predominant factor in battle. The introduction of the breach-loading rifle abolished the power of cavalry to demoralise an unshaken, well-armed enemy. It was failure to realise this, and the belief that shock-tactics by large bodies of cavalry were still possible, that led to so many disasters.

As the power of firearms increased, so shock tactics could only succeed against a previously demoralised, inferior, or surprised enemy.

Throughout the period cavalry were regarded primarily as an arm of assault, and close co-operation in the main battle by means of shock tactics was considered to be their most important role. As a result of training for shock tactics in mass, the individual efficiency of the cavalryman was neglected. At the same time, mobility was sacrificed in order to obtain greater striking power on the battlefield. Consequently, cavalry were seldom employed in, or even capable of performing, the roles of reconnaissance and protection.

When cavalry were suitably trained and equipped, as in the American Civil War, however, they proved themselves to be of the greatest value in reconnaissance and protection. But for these roles, greater mobility and individual efficiency were required.

There were few examples of successful pursuits by cavalry in this period, but what there were showed the value of cavalry for maintaining the impetus of the pursuit, and the annihilating effect when it is sustained. In addition, the examples show that in every instance the pursuit was made in co-operation with other arms; but it is obvious from history that this fact was not recognised at the time, and co-operation with other arms did not become a recognised principle for the employment of cavalry in pursuit.

The American Civil War showed the value of cavalry for carrying out independent missions. It showed the value of bold leading, the necessity for a clearly defined objective, and the value of a threat to the enemy's lines of communications by mobile troops.

Stuart's famous rides did not achieve any really important results, and possibly this is because he had no clearly defined objectives, but went out into the blue to see what damage he could inflict on the enemy if good fortune attended him. Nevertheless, the threat to the lines of communications had a considerable moral effect on the Federal army; and there is no doubt that it was the magnificent leadership of Stuart which enabled these raids to be carried out without serious losses.

In 1865 General Wilson, with fourteen thousand cavalry, marched across Alabama and Georgia. He was opposed by ten thousand cavalry, and many of the important towns were strongly

held by infantry. He marched six hundred miles in thirty days, took three cities, fought five battles, captured six thousand prisoners and one hundred and fifty-six guns, and destroyed many railroads, iron-foundries, and factories. His success was principally due to his bold leading, and to the fact that his troops could fight equally well mounted or dismounted. That was the result of his individual training. He trained his men to be individual cavalrymen, not merely indistinguishable parts of a shock-tactical mass.

But after all, perhaps Wilson's march owes its greatest claim to fame because the tune which was composed to commemorate it —"Marching through Georgia"—is one of the very few tunes which can be played simultaneously by the brass and bugle bands of infantry battalions and school O.T.Cs.

With regard to equipment, a good use of cavalry for reconnaissance was only made when commanders realised that mobility was more important than attacking power in this role. Only lightly equipped cavalry was really mobile. The sword and lance remained the principal weapons for European cavalry, but the modern fire-arm prevented the close contact necessary for the successful use of these weapons. This difficulty was overcome by the American cavalry who used a combination of dismounted action by men armed with rifles and mounted action by men armed with the "arme blanche." Whether this was the best method remained a source of the bitterest controversy in the clubs of Pall Mall for many years.

Many people have a secret ambition to "make history"; but I hope that no officer living to-day will consider himself insulted when I say that the last "historical" period to be examined is from 1871 to 1918. One of the most important events in the history of the world during this period was the Mechanical Revolution. In the military sphere this revolution caused far-reaching changes. There was the great improvement in the range and efficiency of fire-arms and cannon. There was the invention of the internal combustion engine, which introduced cars and lorries to armies; and later the aeroplane and the armoured fighting vehicle were born of the same conception. Thirdly, rapid communication became possible by the means of telegraphy, telephony, and wireless.

The improvement in arms and artillery generally restricted and finally, in intensive warfare conditions, practically paralysed the activities of the existing cavalry organisations.

The internal combustion engine and means of rapid communication paved the way for an entirely new form of mobile force. Mobility had always meant horses. Horses came to mean cavalry. Finally horses came to mean mobility. It was pure logic, for, as Kipling said about the South African War:

"We've spent four hundred million pounds
To learn the fact once more
That horses are faster than men on foot
Since two and two makes four.
For horses have four legs and men have two legs,
and two into four goes twice,
With nothing over—except our lesson—
and very cheap at the price."

That is very true, but the limiting factor there is that "horses are faster than *men on foot.*" Horses are not necessarily faster than *men in lorries.* We must remember the principle that the mobile force of an army must be mobile *relative to the main army.* It is mobile, not merely by the pace which it gets over the ground, but *relatively*—that is to say, in comparison with the pace at which the other parts of the army cover the ground. If a force can move a hundred miles a day in lorries, it cannot be said that horsed cavalry, moving at sixty miles a day, is as mobile as that lorried force. The range of horsed cavalry is limited, and that limit can be exceeded by a mechanised force; therefore, in comparison with a mobile mechanised force, horsed cavalry is no longer relatively mobile.

Lord Roberts, writing on the lessons learnt from the South African War, said "Knee to knee, close order charging, is practically a thing of the past."

Reconnaissance during the South African War became more difficult, more exhausting, and more important. Improved firearms gradually improved the power of the defence, and the power to ward off pursuit. In extensive warfare, such as was met in South Africa, the need for mobile forces became more and more urgent, while their task became more and more difficult. The root of the trouble was that while the demand for mobile forces was becoming increasingly urgent owing to modern conditions, the mobile forces available were becoming less capable, owing to those self-same conditions, of doing what was required of them. "It is the pace that kills."

Then came the Great War. On the Western Front, cavalry on the whole were largely mis-used by both sides, and eventually the opportunity vanished owing to the intensive nature of the war, the "encadré fronts," the miles and miles of wire, and that Queen of the battlefield—the machine gun. In extensive areas, such as Palestine and Mesopotamia, cavalry had more chance; but they were continually hampered by machine guns, and the lack of mobility to gain surprise owing to modern communications and aircraft. The increase in the efficiency of firearms made direct pursuit practically impossible: rearguards had such a sting in their tail that the cavalry could not effectively pursue. Indirect pursuit, such as happened at Megiddo, was the only apparent means of carrying out this role. In fact the action at Megiddo can even be called distant co-operation in the main battle and not a pursuit at all.

The horsed cavalry were being hard put to it: in order to gain a success they had to go "all out." Everything that it was possible for men and horses to do, had to be done; and they even had to do a number of things which had previously been thought impossible. They had nothing in hand, and any advance in the mobility or fire-power of the main armies was going to put the mobile roles of horsed cavalry just out of their reach.

Early in the Great War, inventive minds turned to the development of a vehicle which could be protected by armour plate, move across country, and fire whilst on the move.

This led to the Tank.

The tank was originally built in order to work in close co-operation with the infantry to destroy the enemy machine guns which were making the advance of the infantry impossible. But as tank design improved, tanks began to do the same work that cavalry used to do before the breech-loading rifle was invented: tanks began to be used for shock action. Tank design, and tank ambition, began to look forward to taking a place in mobile formations; and though the limitations of the original or even of the improved tank were many, its characteristics were beginning to single it out as the vehicle of the future. Tanks could laugh at machine guns. Tanks could waltz through barbed wire. Tanks could go where infantry and cavalry could not. Their mobility was relative; but it *was* mobility, because they could still move, while the infantry and the cavalry could not.

When the War opened up, and movement became more general in extensive warfare where distances were great and both infantry and cavalry are once again mobile, the tank fell back into the old tortoise-like role of grinding along, and was only useful in overcoming obstacles which neither the infantry nor the cavalry could surmount.

However, lighter tanks and other armoured fighting vehicles were yet to be invented.

From very early in the Great War, the aeroplane took over one of the roles of cavalry: Strategical reconnaissance.

There were no obstacles for aeroplanes; but they had their limitations, and land forces were still necessary for detailed reconnaissance. As aeroplane design improved so aeroplanes became more and more useful in mobile roles, and were even used for pursuit. Low flying attack against withdrawing troops was very effectively employed in the pursuit after Megiddo, after Vittorio Veneto, and in the final stages on the Western Front. Low flying attack was also used to check enemy pursuit when the British forces had to withdraw in 1918. Aircraft were the most mobile portion of our fighting forces, and were obviously going to take their full share in mobile duties.

After the Great War there was a great swing in favour of more and more mechanisation, and the results of mechanisation have been seen to a certain extent in Abyssinia, Spain, and China, and again in Poland. But in none of these campaigns has there really been equality in either efficiency or material on the opposing sides, so it is difficult to reach any definite conclusion, or to draw any lesson which can be well learnt as to what would happen when both sides are equally matched.

A recent issue of *THE FIGHTING FORCES,* with perhaps more truth than tact, says "The Poles have always shown a pathetic (sic) belief in their cavalry, which formed a large part of their army; and the ineffective showing of their cavalry, *vis-à-vis* the German mechanised detachments, was certainly a contributory cause of their defeat." I think perhaps a more balanced, and certainly more tactful, statement comes from the *CAVALRY JOURNAL*: "Poland's famous cavalry, on which such reliance was placed by her Higher Command, proved unable to keep the

field against the opposing mechanised forces, which were operating dismounted, both in attack and defence, and which can hold a century had so fine and dry an autumn been known in Poland.

That, I think, is the case. In country which is eminently suitable for machine guns, it is folly to expect horsed cavalry to operate without suffering severe casualties; and I do not think it is possible for horsed cavalry to keep the field against enemy armoured fighting vehicles which are *mobile*.

I stress the word mobile because when an armoured fighting vehicle is not mobile it is a stationary fort, and horsed cavalry can ride round it, giving it a wide berth. And there is a very simple, very humble, substance which can render almost any armoured fighting vehicle completely immobile if it is produced in large enough quantities—and that is MUD. In certain countries at certain times of the year there will always be mud. So there will be times, (and there will be many occasions too when there is no mud) when horsed cavalry will be extremely useful, even as they were useful to the Germans for reconnaissance to find routes for their armoured fighting vehicles in Poland.

It all depends upon relative mobility, and the primary consideration that mobile forces must be relatively more mobile than the force to which they belong.

What are the roles of mobile formations? A study of history has shown us that there were six roles allotted to them in the past.

(*a*) Close co-operation in the main battle.
(*b*) Distant co-operation in the main battle.
(*c*) Pursuit.
(*d*) Protection.
(*e*) Reconnaissance.
(*f*) Independent missions.

We have seen that conditions have changed fundamentally since even the Great War. Are these six roles still the essential roles of mobile formations in the future?

The roles of pursuit and independent missions remain unchanged, I think. Whether the pursuit is direct or indirect does not greatly matter: the role is still a role of the mobile formation. It must be. If the enemy is running away faster than the main army can catch it up, and pursuit is necessary, obviously a mobile force is required,

The independent mission, entirely divorced from the main army, must be carried out by a mobile force if that force is to return to the parent force when the mission is completed. That, too, is a role of the mobile force to-day.

What about reconnaissance? We have seen that the aeroplane has practically taken over the functions of long-distance reconnaissance, merely on account of time and space; it has taken over the duties of strategical reconnaissance for similar reasons. Whether or not we can include the Royal Air Force in our mobile formations we may discuss later; but at present let us consider land forces.

Mobile formations, composed of land forces, must still carry out reconnaissance; but that reconnaissance is a much more detailed reconnaissance, a much closer reconnaissance, than that which the Royal Air Force perform. In fact, I think that we should not be far from the truth if we say that all the reconnaissance which land forces now carry out through their mobile forces is really tactical reconnaissance.

The role of protection remains. Human nature demands that when you walk through a strange room in the dark you should spread your hands out in front of you to give you warning of an obstacle. Mobile forces, which can move faster than the main army, are still needed to carry out the role of protection or at any rate protective reconnaissance.

As regards the two remaining roles—close and distant co-operation in the main battle—I suggest that distance is now only a relative term. Owing to speed and range, actual distance does not mean as much as it used to do; so it is suggested that instead of having two roles, close and distant co-operation, we can telescope those two, and make them one—co-operation in the main battle. I do not think that any useful purpose is served any longer by splitting them.

That, then, has reduced the old six roles to five.

Are there any roles which were not formerly recognised as roles of mobile forces, but which should be roles of the mobile forces of the future?

There is one, I think. It was not catalogued as a role in recent years, because it was not apparently regarded as being of sufficient importance. We saw an example of it in Alexander's battle at the crossing of the Jhelum river against Porus in 326 B.C.;

the defeat of the enemy's mobile forces. That object has become of such importance to-day that I am sure it should be considered as one of the definite roles of modern mobile formations.

A force may be advancing with a definite objective and, since it must maintain that objective, it must not be side-tracked by chasing after an enemy mobile force which is trying to harry the lines of communications. The potential danger of that enemy mobile force may be so great, however, that the commander of the advancing force may find it imperative to destroy or neutralise that enemy mobile force. This is obviously a task which can best be taken on by another mobile force; and its role would then be to defeat the enemy's mobile forces.

We have, then, six main roles for mobile formations to-day:

(*a*) Defeat of the enemy's mobile troops.
(*b*) Co-operation in the main battle.
(*c*) Tactical reconnaissance.
(*d*) Protection.
(*e*) Pursuit.
(*f*) Independent missions.

What are the principles which affect the employment of mobile formations in these roles?

Let us examine the first role, *the defeat of the enemy's mobile forces.* The term defeat can be divided into two parts:

(*a*) Destruction, by which we defeat his material.
(*b*) Neutralisation, by which we defeat his object.

In order to attain destruction, we must have superiority in strength, by which I mean superiority in armament and mobility, but not necessarily in numbers. To attain neutralisation, superiority in strength is not essential provided that good use can be made of ground to restrict enemy movement. The neutralising force, therefore, must be capable of holding ground, and of preventing the enemy from surmounting obstacles.

May I stress the point that the force must be capable of *holding ground and of preventing the enemy from surmounting obstacles*?

In the earlier part of this article we saw that whenever cavalry were dismounted in the past they were invariably defeated unless they were specially trained in dismounted work or were amply supported by artillery; moreover, we found that they could not hold ground while they were mounted. We must beware lest

we fall into the same errors that misled our predecessors; therefore we must make special dispensation for this individual training in dismounted work, and must provide ample artillery support.

In this role of defeating the enemy's mobile forces, perhaps surprise is the most imporant factor, and, conversely, the need for obtaining information. I suggest—in fact I merely repeat what will very soon be a platitude—it is practically impossible in these days to conceal one's own movements unless one has at least local air superiority. We have talked and written for some years of the importance of gaining air superiority; but I do not think that anyone ever realised how absolutely helpless an army can be that is robbed of its air forces, or the astonishing weight of advantage that accrues automatically to an army which has gained complete air superiority, until the lessons of the Polish campaign of September 1939 were given to the world. Stephen King-Hall, in a recent News-Letter said that it was impossible for the Poles to move by day, and the German aircraft continually broke up counter-attacks before they could be properly developed. In short, he says, if troops are engaged in moving warfare, they are in a pretty hopeless position if the enemy has command of the air over their heads.

I said that to attain neutralisation, superority in strength is not essential provided that good use can be made of ground to restrict enemy movement. Where two mobile forces oppose one another, the principles which appear to apply are those which govern the actions of two opposing fleets on the sea, but with one very important difference—the ground factor. I think we must watch this point rather carefully.

We, in a mobile formation, are not necessarily confined to our vehicle: we can get out and walk about on the ground. And since we can, if we wish, get out of our vehicle and dig a hole in the ground; and since we can get hull down behind a small hill or in a small nala, we must turn our ability to good effect, and must not allow ourselves to be bound by the necessary limitations of the Royal Navy.

The second role is *Co-operation in the main battle.*

For this role to be carried out satisfactorily, the ground must be suitable for the movement and manœuvre of mobile forces. Again surprise must be aimed at, and success will depend very largely upon whether we achieve surprise or not. The moment

for deployment must be carefully chosen, so as to allow the greatest chance of success to the mobile formation, and to inflict the maximum damage on the enemy. To achieve any decisive effect, the principle of concentration must be observed; too great a dispersion or the employment of too small numbers is unlikely to obtain any result commensurate with the risk to the mobile force employed. The object aimed at must be worth the risk to the scanty and often irreplaceable mobile force—which is all that may be expected to exist in prevailing conditions. The object chosen must be suitable for the characteristics of the mobile force. We must remember that the mobile force is not a battalion of "I" tanks, which are designed to accompany the slow-moving infantry and to batter down their obstacles. We did learn that lesson some years ago; but the Germans apparently forgot it in Poland, and frequently used their light mobile tanks in "I" tank roles. They found it ineffective and expensive. There is all too often a tendency to dig up potatoes with a silver spoon, which is an extravagant and not very efficient use of one's resources.

Finally, the situation must be clear enough to allow the commander of the mobile force a free hand once his troops are engaged: once a mobile force is committed to the battle, attempts at close control by the superior commander are likely to limit the results that may be achieved.

The third role is *Tactical Reconnaissance.*

Owing to the facts that in the present and in possible future wars, theatres of operations are likely to be big, armies to be large and movement rapid—at any rate in the opening stages especially in extensive warfare—the responsibilities of the mobile troops on land for strategical reconnaissance will probably be subordinate to those of the Royal Air Force, with whom there must be the closest liaison. When the main armies are not in contact, tactical reconnaissance will be chiefly carried out by mobile troops though here again the responsibilities of the Army and the Royal Air Force must be carefully co-ordinated. In order to carry out this role of tactical reconnaissance, a mobile force must be able to disperse and to search ground to obtain information; it must have the power with which to fight if any opposition is met. It must have considerable speed and radius of action which can be developed across country; and it must have an efficient means by which to transmit rapidly the information which it has obtained.

The fourth role is *Protection.*

Protection may include covering the concentration of a force, protecting an advance, protecting a flank, and covering a withdrawal. The employment of a complete mobile force for the protection of a flank will be unusual. For covering a concentration, and the advance from a concentration area, a mobile force will normally be essential. For covering a withdrawal, a mobile force, though desirable, is no longer necessary owing to the extreme power of modern defence and the mechanisation of infantry.

All the conditions of reconnaissance apply equally to protection. In addition, more holding power is necessary when protecting, and also the power to deliver a strong counter-attack. For early warning of enemy movement, the co-operation of aircraft is essential.

The fifth role is *Pursuit.*

I think that perhaps it has almost become an axiom that *indirect* pursuit will generally achieve greater results than *direct* pursuit. By direct pursuit I mean chasing straight after the enemy, just as a householder might chase straight after a burglar whom he has surprised robbing the silver-chest: he will be very hard to catch unless he trips over the stuffed tiger's head in the hall. But an example of indirect pursuit is when the householder's wife nips down the fire-escape and lays the burglar low with the poker as he comes out of the front door. The example of the cavalry at Megiddo is indirect pursuit, though as I said before it is hard to distinguish it from distant co-operation in the main battle—and some people to-day insist that it was a case of co-operation and not of pursuit. Whichever way you have it, the cavalry pursued past the Turks, and got behind them; and then the Turks were caught like rats in a trap between the main army and the cavalry. If pursuit is direct, it must be carried out on a broad front owing to the power of modern defensive weapons. Pursuit must be carried out quickly, closely, boldly, and persistently, in adequate strength; and it must be capable of being sustained. To chase a short way is seldom of any use: the enemy must be chased until he is exhausted; then you've got him.

For this very reason, fresh troops should be employed for the pursuit. It is obvious that tired troops have little advantage over

the enemy as regards mobility. Moreover, it is practically essential that aircraft should be made available to take their part in the chase.

Finally we have the sixth role, *Independent missions.*

The chief principle which affects the employment of mobile forces on independent missions is that the objective must be of sufficient importance to justify the increased risk which is incurred by the force despatched, owing to the vulnerability of a mobile force when it is acting independently of other formations. The importance of the objective must also justify the detaching of mobile troops which will be temporarily lost to the main force while the independent operation is in progress. Another principle is that the force must be sufficiently strong to achieve its object without any outside assistance. To do this, the force must be able to maintain itself and to provide an all round protection for itself at the halt and on the move at all times. If the force is inadequate to do this, a reverse may entail its complete loss. And then you have lost your mobile force.

The commander of the mobile force must be allowed latitude in deciding the *method* of carrying out his task. Owing to the difficulty of predicting distant enemy actions and dispositions, a fixed plan may jeopardise the success of the operation. In addition, the mobile formation so engaged must not be allotted any other role when it is engaged on an independent mission: it must be absolutely divorced from the main army.

I hope that I may have made clear that the principles which affect the employment of mobile forces, however modern, are exactly the same as they were when mobile forces consisted entirely of cavalry. In other words, when reading Cavalry Training, you can practically rub out the word "horse" and substitute the term "armoured fighting vehicle" and find that the precepts contained in that book make even better sense than they did before.

I cannot stress too strongly the importance of realising that armoured divisions and brigades are not part of the Grand Fleet, are not "I" tanks; are not slow-moving mechanical elephants used to push down obstacles for the infantry in the way that the Royal Tank Corps pushed down obstacles on the Western Front in the Great War. We have got our battalions of "I" tanks to do that work for the infantry to-day. Our armoured divisions, our armoured brigades, are the mobile forces of to-day; and, as you have

seen, they have to perform exactly the same functions as were performed by the mobile forces of yesterday.

As long as mechanical vehicles can remain mobile, we have the armoured fighting vehicle instead of the horse. But the principles are exactly the same as before. The cavalry spirit of old is every bit as essential to the successful and brilliant employment of mobile forces to-day as it was throughout the ages.

I am going to round off this article, not by saying what we have *got*—for I imagine that would agitate the censor unduly—but by suggesting what the component parts of a modern mobile force might very well be. If these ideas are sound, then they will be a guide to examining organisations with a critical eye; if they are unsound, then experience will have been gained in discovering their unsoundness.

What are we up against? Enemy armoured fighting vehicles, wire, gas, artillery, machine guns, anti-tank guns and rifles, air forces, speed, distances, and so on.

What have we got to do? We have got to carry out some or all of six roles:

(*a*) Defeat of the enemy's mobile forces.
(*b*) Co-operation in the main battle.
(*c*) Tactical reconnaissance.
(*d*) Protection.
(*e*) Pursuit.
(*f*) Independent missions.

What do we need in order to enable our mobile forces to perform these roles?

I would suggest that the mobile formations need six different elements, elements which have been deduced from a logical study of the history of mobile forces.

The first is a *reconnaissance* element.

This might consist of lightly-armoured inconspicuous vehicles of considerable cross-country performance, capable of overcoming minor opposition. It would be a protective and reconnoitring element.

The second is the *striking* element.

This might consist of armoured vehicles with great hitting power and a good average cross country performance. This will be the main element for the defeat of the enemy's mobile forces, for co-operation in the main battle, and for pursuit.

The third is the *motorised* element.

This might consist of troops who are capable of operating dismounted both in attack and defence, and which can hold ground by digging holes and getting into them if need be. This element, strong in machine guns and anti-tank rifles, will frequently be used as the pivot round which the light and striking elements will operate.

The fourth is the *artillery* element.

Although every tank would have its own guns, we have seen that mobile forces always needed artillery to support them when they were checked by an obstacle, or when they were defending an obstacle. A highly mobile gun, such as the 25 pr., might be used for this purpose, as well as the anti-tank gun.

The fifth is the *engineer* element.

Engineers are needed for the rapid construction of obstacles or hasty demolitions, and to do any necessary bridging—just sufficient light bridging to keep the mobile force mobile when it cannot go round.

The sixth element is the air element.

This is most necessary for relatively distant reconnaissance and for close co-operation. Moreover, the air can provide a most useful and powerful supplement to the artillery by low flying attack and dive bombing, in the same way that the Germans used their air forces for this purpose in Poland. Whether this air element should be included within the mobile force, or whether it should be attached as and when required, is a question of so controversial a nature that space will not admit of my attempting to answer it in this particular article.

I suggest that each one of those six elements must find a place in any mobile force to-day, otherwise, from the teachings of history, that mobile force will not be organised on sound lines. In what proportion they should be present depends entirely upon circumstances, upon finance, upon a wealth of diverse conditions, and I do not propose to examine the question any more closely here. But the subject provides a positive banquet for the thoughtful soldier.

In conclusion, I would like to suggest that, although some of my ideas may prove to be a powerful emetic to several people, they will have served their purpose if they induce those people to

publish their sounder views for all the world to read: though I apologise for the discomfort caused.

Finally, I would again stress the fact that the principles of mobile forces have not changed in any way whatever since mobile forces were first used, because those principles are sound and are based on *relative mobility*. Whether the mobile force consists of a practically naked man sitting on a small Median pony, or of a highly-skilled technician driving the latest form of tank, the personnel of mobile forces are cavalrymen, trained to cavalry ideas, imbued with the cavalry spirit.

It isn't the armoured fighting vehicle, the light tank, or the cruiser, which is going to make our mobile forces things to be reckoned with: it is the cavalrymen actuating their means of *relative mobility*. May they remain true to their principles!

MILITARY READING

By "Siegfried P."

The Secretary's notes in the April 1938 and July 1939 issues of this Journal gave a list of books recommended for study for promotion and Staff College examinations. These lists were made out for the syllabi then in vogue, but they are equally applicable to-day for all-round military study.

This somewhat formidable array of books may appear unduly large to a student who has been urged to read a little and think a lot. He remembers that he must also constantly study his text books and manuals, and that he should read the foremost military quarterlies and the military articles in the leading newspapers if he is to keep abreast of current military thought. He may also wish to study a foreign language or languages. Nevertheless, there is plenty of time for him to read all these books and many more between the ages of nineteen and thirty and they should be read not only by Staff College candidates but by all officers.

It is not the intention of this writer to dwell on the books in these lists which are admirable, but first to draw attention to the fact that only the first and second chapters of Colonel Henderson's "Science of War" (1905) are recommended in the July 1939 list, and secondly to suggest what other books should be read.

In a lesser degree Henderson's writings did for the army what Captain Mahon's works did for the navy. They opened the eyes of many what military criticism can and should be. His collection of essays entitled "The Science of War," although written between 1891 and 1903, will remain a British military classic. It should be the first of the above-mentioned lists of books to be read, and not only the first two chapters but the whole book and especially Chapter VII, "Lessons from the past for the future."

Is it necessary to read any military literature previous to Henderson's book? In it he recommended to the students of his day "A Precis of Modern Military Tactics," written by Colonel R. Home in 1873, revised and rewritten by Lieut.-Colonel S. C. Pratt in 1892, and Captain C. Clery's "Minor Tactics" (first edition in 1877). Unless the modern student is pressed for time, he will do well to read them too.

Von der Goltz's "Nation in Arms" (1883 First Edition) should be studied by all. It gives a wonderful insight into German military thought. The "Journal of the United States Artillery" reviewed it as a work "full of interest from beginning to end, and must always be one of the world's military classics. It repays earnest study alike of statesmen and soldiers."

Colonel Maude's "Cavalry: Its past and present" (1903) is another book which should be read by all, being full of controversial matter.

Those who think pre-XXth Century military history too antiquated for consideration should remember the immutability of principles, and note that even Liddell Hart has devoted a whole book to Scipio Africanus. *Plus ca change, plus c'est la même chose,* and fresh ideas even regarding surprise can be obtained from the ancients. Besides, every professional should know the history of his profession.

And after Henderson, apart from our lists, what other books should be chosen out of the wealth of military literature at our disposal in the splendid military station and institution libraries of to-day?

The latest edition of Foch's "Principles of War" should be read not only as a book of reference, as suggested in the April 1938 issue of the Journal, but because it gives an insight into the French mathematical treatment of military thought expressed by the supreme modern military master of our great ally.

"A History of Tactics" by Captain Johnstone (1906) is an interesting work bringing Home and Clery up to that date and is more easily obtainable now than either of those two.

Callwell's "Small Wars" (1906) is another book that has not yet been fully superseded.

The second edition (1913) of Colonel G. T. Denison's "A History of Cavalry" (brought up to date from the first edition of 1877 which had won the Emperor of Russia's prize for the best history of cavalry) is full of interesting research and of great interest to other arms besides horsed cavalry.

Cole and Priestley's "British Military History, 1660—1936," is an enjoyable time-saving account of British military activities, and gives a good ground for further study.

"The Green Curve" by Old Lukoie is a pre-last-war classic of its kind, and everyone will enjoy it and benefit from its reading.

"The Aftermath," by Winston Churchill, gives a magnificent description of "after the Great War."

"Forty-one years in India," by Lord Roberts, is a classic as fresh to-day as when it was written, and should be read by all professional officers who will probably have to serve in India for part of their service.

There are many other valuable books, but as "of learning there is no end," so there must be limit to what the student can assimilate. The writer suggests that enough, and what is best, has now been given to digest before the age of thirty, except that a short history of the world should be added to get perspective. Van Loon's "The Story of Mankind" and Wells' "Outlines of History" are good short and long examples of such a history (even though Wells does omit the name of the First Duke of Marlborough!), and Fisher's "History of Europe" is magnificent.

There should be no need for a student to delve further into military antiquity before he is thirty unless he has an archæological or historical bent; but as new military books become published, he would do well to read those specially recommended in the book reviews. Our military quarterlies review all military books worth considering, *e.g.*, "The Defence of Britain" by Liddell Hart, reviewed in this Journal in October 1939.

Our text-books are the outcome of military classics and war experience of the past. The wisdom of Napoleon, Jomini, Clausewitz, Hamley, and other earlier and later masters of military writing tempered by modern experience have been condensed into these text-books (see the bibliography in Home's book among others). Henderson and others quoted above have explained beyond doubt why the text-books themselves are not sufficient for an officer. It would be unseemly for the writer to repeat their arguments: but, besides the practical value of such reading which they stress, there is surely an aesthetic value. An officer should desire to be a cultivated critic of his profession and not only a champion gladiator or super-N.C.O. (and many N.C.O.s nowadays are highly educated individuals!). For this an educated background is essential.

Again a professional officer may be a fine leader of men with sound tactical knowledge, but he should also have ambition. Only by supreme mistake will even a Major-Generalcy come to the uncultured; and if it comes how difficult for him to show his best, to

prove his point in debate perhaps before glib-tongued civilians whose general education in their early twenties gave historical and literary knowledge, critical and forensic power, often enhanced by a hobby of military study, which can only be equalled by the officer who has studied seriously (see Winston Churchill's "My Early Life"). In fact the army's correct point of view may go by default through the personal equation in the council chamber, where wisdom from knowledge acquired by study is required to fortify a ready tongue which the leader of military men may lack.

By the age of thirty an officer should be able to hold his own in argument with his civilian counterpart on all matters pertaining to the army. Hence the stressing of military reading and the now frequent use of the tongue in discussions and debates.

List of Military Books Recommended for Study excluding Manuals, Official Memoranda, Periodicals and administrative Books; in List of U.S.I.I. Journal April, 1938:

The Defence of Duffers Drift.

Tactical Schemes with Solutions, Series I and II (Kirby and Kenneddy), 1931.

Elementary Tactics or the Art of War, British School. Vol. (Pakenham Walsh), 1926.

Imperial Military Geography (Cole).

Elements of Imperial Defence (Boycott), 1936.

*British Strategy (Maurice), 1929.

Outline of the Development of the British Army up to 1914 (Hastings Anderson), 1931.

Passing It On (Skeen).

*The Science of War (Henderson), 1905.

The Transformation of War (Colin), 1912.

The War of Lost Opportunities (Hoffman), 1924.

The Principles of War (Foch), 1918.

The Direction of War (Bird), 1925.

*Soldiers and Statesmen (Robertson), 1926.

Historical Illustrations to F.S.R. II (Eady), 1926.

The British Way in Warfare (Liddell Hart), 1932.

Napoleon's Campaign in 1796 in Italy (Burton), 1912.

Waterloo Campaign (Robinson).

Outline History of Russo-Japanese War (Pakenham Walsh), 1935.

*The World Crisis (Churchill), 1931 (abridged and revised edition).
*A History of the Great War (Cruttwell), 1936.
*The Palestine Campaign (Wavell), 1931.
A Brief Outline of the Campaign in Mesopotamia (Evans), 1926.
*Official Histories of the War—France, Egypt, Palestine, Mesopotamia, Gallipoli.
Waziristan, 1919-20 (Watteville).
The Third Afghan War (Official), 1926.
The Government of the British Empire (Jenks).
A Short History of British Expansion (Williamson), 1930.

In List of U.S.I.I. Journal of July, 1939 (*War Office List*):

Wellington (Fortescue).
Wellington's Army (Oman).
Decisive Wars of History (Liddell Hart).
History of the Civil War in the United States (Wood and Edmond).
Stonewall Jackson (Henderson).
Sherman (Liddell Hart).
Lee (Maurice).
Forest (Lyttle).
British Strategy in the Great War (Cruttwell).
*History of the Great War 1914—19 (Cruttwell).
*World Crisis (abridged edition) (Winston Churchill).
*Soldiers and Statesmen (Robertson).
The War Outline (Liddell Hart).
Liaison (Spears).
The Campaign of the Marne (Sewell Tyng).
Advance from Mons (Bloem).
*The Official Histories of the War—France, Egypt, Palestine, Mesopotamia, Gallipoli.
*Palestine Campaign (Wavell).
London Men in Palestine (Caldecott).
Tannenburg (Ironside).
The Truth About Tannenburg (Von Hoffman).
Encyclopædia Brittanica's Articles on "Strategy" and on the above campaigns.
*British Strategy (Maurice).
*The Science of War (Henderson).
The Army and Sea Power (Pargiter and Eady).
Wellington (Cruttwell).

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* Books mentioned in both lists.

LEARNING TURKISH

By Karshish

When I first went to Turkey in 1919, I took a decision which was regarded with grave misgiving by most of my brother officers. I decided to learn Turkish. In spite of frequent and well-meant attempts to deter me, I did learn Turkish and though it did not contribute much, if at all, to my advancement in the Service, it enabled me to spend four happy and interesting years in Turkey. Many years of friendly relations between Great Britain and Turkey have now been crowned by the Treaty of October, 1939, and it is not unreasonable to expect that intercourse between the two countries will become increasingly close. This being so, it seems likely that, when the popular misconception about all educated Turks speaking French has been finally exploded, a knowledge of Turkish may be considered more important for officers (even Staff College graduates!) of the Army than it is at present. It is partly with a view to stimulating a desire for such knowledge that I have written this article and I have accompanied it with a few suggestions about books which may be useful to students of one of the most ingenious and beautiful languages in the world.

I began my Turkish studies while travelling from Karachi to the Dardanelles. I knew nothing whatever about it and my only book was "Turkish Self-taught" in Marlborough's Self-taught Series. By the time I had reached the Indian Base Depot at Chanakkalé on the Dardanelles, my studies had not progressed much beyond the numerals and the knowledge that the Turkish verb was so elastic that it could, in a single word, express the somewhat involved idea of "not to be able to be obliged to cause others to love each other mutually."

Since the Armistice, Turkey had been in the possession of an Allied Army of Occupation. The Turks were at first cowed and disposed to be friendly but this state of affairs was soon to be altered by the Tripartite agreement which, among other things, resulted in the landing of a Greek force at Smyrna in May, 1919. The situation thenceforward gradually deteriorated from the Allied point of view. Stung to the quick by the sup-

port given to their traditional enemies, the Turks rallied and, greatly helped by political events, ultimately succeeded in ridding themselves of the Greek Army and obtaining a substantial revision of the Treaty of Sêvres. When I arrived at Chanakkalé, the so-called Army of the Black Sea was occupying Constantinople, actually if not technically, and had units and Intelligence officers all over Anatolia. My own battalion was in the Caucasus but I was fated not to join it nor indeed did I ever see it again. To my intense annoyance I was detained at Chanakkalé as adjutant of the Indian Base Depot. It was only after the first difficulty of organising the depot was over, when those long workless afternoons and evenings which are such a dear feature of Army life, began to follow each other with undisturbed regularity, that I realised that I was very fortunate and could now begin my language studies in earnest.

It is not easy to learn Turkish anywhere and in Chanakkalé, though in Turkey, it was very difficult indeed. The Indian Base Depot was about three-and-a-half miles from the town and there was no conveyance to be had. There was no teacher to be found in the depot except an interpreter, Socratis Mikailides, who offered his services with the reassuring statement that he could at least teach me how to write "some words." But Socratis, though a good fellow and a good teacher of Greek, was hopeless at Turkish. Next I tried O Kyrios Philanthides, "Professor of Languages" in Chanakkalé. Three times a week I walked three-and-a-half miles and back in the sun to hear this "son of a lover of flowers" mispronounce and mutilate one of the most melodious tongues in the world. At length I had had enough and took as teacher a Turkish officer who was in a prison camp near the depot as a "political offender." I did not then know what this meant and am not altogether sure now, but Hikmet Bey was a nice man and pleased to come to my comparatively fly-proof tent and speak in liquid tones his incomparable language. We had no common tongue for Hikmet knew only a few words of French, but from him I acquired something of the "ahenk kaideleri," the rules of harmony of Turkish. I now had a better book than Thimm's "Turkish Self-taught," a little book of Grammar and phrases by some Armenian. It was pretty accurate so far as it went but did not thoroughly explain the peculiarities of the language.

It was only when, during a visit to Constantinople, I acquired Moise Bey's "Méthode Turque" (still one of the best books) that

I began to understand the structure of the language. The principle difficulty lies in the entire absence of any sort of relative pronoun. The difficulty is aggravated by the fact that there is always a temptation to use the particle "ki" which is incorrectly used as a relative by Greeks and others of non-Turkish origin. "I know that the man who gave you permission has gone away" presents itself to the Turkish mind as "To you permission of the having given man his going away I know." Intransitive verbs, when used in a relative clause, seem to lose their properties. "The book which I took" becomes "the having been taken by me book." This is clear enough, but when "the chair in which I sat" becomes "the having been sat (not sat in) by me chair" one is somewhat perplexed. In so far as these difficulties are capable of elucidation, Moise Bey explains them but for some time I continued to find the constant use of participles and gerunds most confusing.

After a few weeks, Hikmet Bey was released to resume his life of political offensiveness and I started to work with Anyg Guljian, clerk to the Brigade Education Officer. Anyg was an Armenian girl and a very good one. She originated from Eskishehir where she had been well-educated in an American school. She had left Eskishehir during the War to escape the attentions of a Turkish officer, and, knowing English and French well, she had soon found employment. She spoke Turkish quite perfectly except for the slight but characteristic Armenian accent. This I acquired myself and it is noticed by every Turk with whom I speak. I do not care, for it is a pleasant souvenir of a good and painstaking teacher.

In the autumn of 1919 the depot moved to Bostanjik, near Constantinople. Anyg also moved with her Education Office to Moda on the Asiatic shore of the Bosphorus and eight miles from Bostanjik. I could now speak both Turkish and Greek with some fluency and, tired of the depot, I visited General Headquarters in Constantinople to offer myself for Intelligence duties. Somewhat to my mortification I was received with thinly veiled contempt and was told that I must not think a mere knowledge of languages was of any use in Intelligence work. It was experience that counted, and anyway they did not want Indian Army officers.

Rather crestfallen I withdrew and decided to use other means of getting away from the depot. A chance soon presented

itself. Anyg's Education Officer whose father had been a prominent member of the Anti-vaccination League, had refused to be vaccinated and was to be demobilised in consequence. He recommended that I should relieve him and, strange to relate, although an Indian Army officer could not be employed in Intelligence, there seemed to be no objection to a partially educated Indian Army officer of twenty-two being employed to supervise the education of British soldiers and to control some half dozen unit Education Officers most of whom were professional schoolmasters. My object in taking on this work was simply to get an opportunity of blowing my own trumpet at Divisional Headquarters. My conscience sometimes smote me but I do not think that I did much harm and really did my best to supply these excellent men with books and stationery.

While in Bostanjik, I had worked for a while with an Armenian telegraph clerk from the railway station. This no doubt increased my Armenian accent and it may be asked why I did not employ Turkish teachers. The reason is that it was then exceedingly difficult to find Turks who had any knowledge of teaching or even a knowledge of the structure of their own language. Women, who are always the best language teachers, were in those days to a large extent secluded and the best available alternative was to use Armenian.

I had now acquired more grammars and dictionaries. The only comparatively modern English-Turkish Grammar was Hagopian's which is by no means satisfactory though it deals well with the Arabic element in Turkish. I had Redhouse's and Sami Bey's dictionaries. The former I found of little use and it is only recently that I have learned to respect Redhouse and his like for the great pioneer work they have done in languages...They had practically nothing on which to base their work and the task of making the Turks give up the secrets and jewels of their language in which they themselves took little interest must have been a gigantic one. There are many redundancies and many omissions in Redhouse but I fancy that what appear to be omissions are mostly modernisms while the redundancies merely illustrate the tendency of that age towards prolixity. Sami Bey's Turkish-French dictionary was, and still is in spite of the old orthography, an admirable dictionary of Turkish. He generously includes a number of words not used in Ottoman Turkish but current in North Persia and Turkestan.

I took up residence in Moda and led a very pleasant existence. My sister had come out to spend a few months with me and took an intelligent interest in my language studies which gave me great gratification for I got but little encouragement from my brother officers. Anyg went back to Chanakkalé in May so I only had two months more of her instruction. She taught me much of the idiomatic side of Turkish and even some tongue-twisters. One of these I still remember: "Yamalamalamy, yamalamamalymy?"—"Should it be patched or not?" She gave me a fairly accurate account of the Armenian massacres and painted a lurid and generally speaking inaccurate picture of the Turkish character. The desperate hatred then existing between Turks and Armenians was not, as many people suppose, of ancient origin. For centuries they lived amicably side by side and the start of the feud can, perhaps, be traced to American uplift carried out by missionaries in the Eastern Vilayets. This gave a bogus sense of nationality to a people whose national entity geography had made impossible. It had tragic results when the Committee of Union and Progress got busy with their Pan-Turk policy. Be that as it may, Anyg hated the Turks and did not see much more of them, for shortly afterwards she went to the United States and is probably still there.

It had certainly been a sound move to obtain an entrée to Divisional Headquarters by becoming Education Officer. My knowledge of Greek and Turkish soon became known and I was several times employed as an interpreter. Early in June my real chance came. Near the village of Beikos on the Bosphorus, an Indian battalion was stationed. Further down the coast was a Greek battalion. Very early one morning, a band of brigands came into Beikos, sacked the police-station and took away a quantity of flour. One or two members of this band, apparently posted as look-outs on the road near the ferry landing-stage, fired at and killed an Indian Officer who was coming down to catch the 5-30 A.M. ferry to Constantinople. So far as could be ascertained afterwards, the whole band then beat a hasty retreat. The Indian battalion was now aroused and, not thoroughly understanding what had happened, carried out a house-to-house search for arms and arrested about eighty people. Meanwhile, the Greek battalion was moving towards Beikos and a scuffle between British and Greek troops was narrowly avoided. This situation was, of course, reported to Headquarters, and on my return from a day in the country, I was ordered to go immediately to Beikos by motor-launch and clear up the situation.

I arrived at about 10-30 P.M. greatly to the surprise of the Indian Battalion who thought I had come to educate them, and next morning I proceeded to examine the prisoners. I at once began to feel that my knowledge of Turkish was gravely deficient. I could manage all right with educated people but some of the peasants I found very difficult to follow at first. With the dawn came crowds of women to plead for their men-folk and I spent the whole day interviewing these and the prisoners. Most of the women were villagers, but as I sat at my table beneath a tree, there came one heavily veiled young woman who, by her carriage and the rich silk of the *charshaf* I could see belonged to a different class. She sat down on the chair I offered and at once lifted her veil from one of the most lovely faces I have ever seen. I then had my first experience of hearing the most melodious of languages spoken by a beautiful and cultivated Turkish woman, Zahiré, as I afterwards found her name was, explained that her father, a retired Army officer, was among the prisoners and since he was quite innocent and the sole protector of herself and her sister, would I please release him at once? She then smiled, thinking, and not without reason, that her father was already as good as released. I did in fact release the old man the next day, partly because he was obviously innocent and partly because of Zahiré's irresistible petition.

My investigations proceeded and gradually the prisoners were released and order re-established. G.H.Q. had become somewhat alarmed and a mixed brigade was rapidly formed at Beikos and a staff provided, my work being that of Intelligence Officer. We lived in Sultan Aziz's palace overlooking the Bosphorus down to which stretched a terraced garden with broad white marble steps on the water's edge. For work I toured the country and patrolled the Bosphorus in a motor-launch, satisfied myself that the brigands were brigands and not Nationalists, interpreted for the Brigade Commander and wrote reports to G.H.Q. For recreation, I bathed and walked and enjoyed local society. The latter included, of course, Ali Bey, Zahiré's father and, shortly after his release, I was duly invited to dinner. It was quite delightful. Zahiré proved to be of a roguish and charming disposition, while her sister was a handsome girl whose husband's "morals had broken up," as I was informed. The food was excellent and Ali Bey a good host. Later, when I knew them better, I was allowed into what was still called the "haremlik" and used to sit talking to the girls while Ali Bey nodded over his newspaper.

The ban on the employment of Indian Army officers in Intelligence had now evidently been lifted for when things had quietened down at Beikos, another officer was sent to relieve me and I was ordered to report to the General Staff. I was employed in a section of G. S. "I" and I cannot say that I found the work in the least degree interesting. It seemed to consist entirely in reading through reports and initialing them. During this time I lived in the London Hotel and spent most of my evenings studying Turkish. I now had a real Turk for a teacher but I did not make much progress with him. I began, however, to read the newspapers and also the anecdotes of Nasreddin Hoja. Modern Turkish literature is very poor and at that time consisted largely of translations from the less reputable Continental authors. I remember some years later, an Afghan Consul-General in Iran showing me what he described as the latest example of Turkish literary genius: it was a Turkish translation of "La Garconne!" I had not aspired yet to such writers as Hussein Rahmi and Hussein Cahit who were then considered to be Turkey's best novelists.

I had applied to sit for the Turkish Interpretership examination in London and, immediately on my arrival in England I began work at the School of Oriental Studies. The Turkish professor was then, as now, Ali Riza Bey, without exception the most enlightened teacher of any language I have ever met. He had once been employed in the Ministry of Agriculture in Smyrna but when I met him he had been in England many years. Arriving in England by mistake (he wished to go to America) just before the War, he took up teaching Turkish in order to escape internment. His method is difficult to describe as he taught largely by means of diagrams at the drawing of which he was amazingly adept. Every lesson resulted in my taking away sheaves of foolscap covered with circles, arrows and shading, all done quite impromptu and illustrating in the most graphic way possible the intricacies of Turkish grammar and syntax. Not a great scholar and by no means perfect in English, Ali Riza had, nevertheless, an extraordinary "sense" of his own language.

In addition to teaching me Turkish, Ali Riza also taught me a great deal about the Turks which I had not realised before. In Smyrna I had got to know and like the Greeks and had, as it were, taken sides with them against the Turks. Ali Riza showed me that I really knew nothing of the Turks and strongly advised me

to get to know them better before I made up my mind about them.

In June I qualified as a First Class Interpreter in Turkish and a little later gained two diplomas at the School of Oriental Studies. Until I returned to Turkey at the end of 1921 I laboured under the erroneous impression that I knew Turkish thoroughly.

On my return to Constantinople I was appointed secretary to one of the inter-allied commissions working at the Ottoman War Office. My office was in the Ministry and I was in close touch with all the branches of the Staff both personally and by telephone. The first thing I found out was that my Turkish was nothing like good enough. The telephone defeated me as it will defeat many a so-called First Class Interpreter. I did not even know the preliminaries: "Neresi orasy, effendim—?"—"Where is that?" (*i.e.*, whose house or office) and then "Kimile musherref oliyorum, effendim?"—"By whom am I being honoured?" (*i.e.*, Who is speaking?).

I was living at this time in Bayazid, the heart of the Turkish quarter and at once set about improving my knowledge under two teachers, one the Professor of Psychology at the Istanbul University and the other, Remzi Bey, Chief of one of the Sections of the General Staff and sometime A.D.C. to General Liman von Sanders. To the latter I went in the evenings and from him and his cheerful wife I imbibed much knowledge. He spoke at a great rate which was just what I wanted and he was obliging and fertile in his ideas for dispelling my ignorance of the Turkish language. Together we read the greater part of "Turoman," one of Hussein Rahmi's novels and a remarkable picture of lower middle-class Turkish life. Madame Remzi would rally me for blushing and hesitating over some of the freer allusions and I dare say she thought me an insufferable prig.

Life was not altogether easy in the Commission. My chief was C—, a fine soldier and gentleman with whom I had little in common. I fear he disliked me very much and I was foolish enough not even to pretend to understand his attitude that all officers should be with their regiments and that those who unavoidably were extra-regimentally employed, should deplore the fact and try and get back to their regiments as soon as possible. "You have missed your vocation," he said to me one evening after an argument on this subject, "You should have gone into politics and politics of the lowest and most heckling description." C—was no linguist but fancied his French and insisted on speaking that

long-suffering language. I can only remember a few of his best expressions. "Je vous donne mon mot"—"I give you my word" was one, and another—"fulfiller les conditions" which meant just what it seems to mean. The worst came, however, when he decided to learn Turkish. It was not until, when intending to order a car to be sent for another member of the Commission, he inadvertently explained to the Turkish orderly that the other member had a very disagreeable deformity, that I felt it my duty to hint to him that his Turkish studies might have unpleasant results. He took this well and gave up the unequal struggle. In spite of our differences I liked him and when I left the Commission to go to G.H.Q., I was gratified to hear him say, "When I first met you I thought you were the most frightful—but I must say I find now you are not *quite* such a—as I thought." This was high praise.

I had one or two interesting experiences in the War Office. One day I was seated at work when there was a scuffle outside, the door was flung open and an elderly Turkish Colonel entered at the double hotly pursued by two other officers. With some irritation I asked what the matter was. Breathing heavily the Colonel said that he placed himself under the protection of the British Flag. I told him that he could hardly do that in the Turkish Ministry of War and requested him to withdraw to the adjoining room. When he had done this the other officers told me that this was Colonel F—whom they had been escorting to the Court-Martial at which he was being tried, when he had suddenly dodged them and run into my office. C—was not in the Office at the time so I went to see Zia Pasha, the War Minister to ask for further details for I hardly liked to turn away someone who asked for protection even though it was not our policy to interfere in cases of this kind. Zia Pasha told me that Colonel F—was being tried by Court-Martial for a serious breach of discipline the nature of which he did not specify. He also told me that during the War Colonel F—had commanded a certain Prisoners of War Camp. After the Armistice, the British authorities had thought fit to present him with a document of appreciation of the way in which he had treated the prisoners under his care. The War Minister believed that it was by virtue of the possession of this document that Colonel F—had sought the protection of the British. He requested that, as the present matter had no connection with Prisoners of War, we would not think it necessary to hinder the ordinary march of Turkish military justice. I then telephoned to G.H.Q. for instructions

and was told to hand over the Colonel to his guards. It was not pleasant to see the old man frogmarched out of the room expostulating loudly. I learnt afterwards, however, that his lenient treatment of prisoners had been actuated more by motives of insurance than anything else. Apparently he used openly to state that he thought Great Britain was going to win the war and would show substantial appreciation of his lenience.

Another unexpected visitor in the War Office was Zahiré, the Beikos beauty. She must have bribed the door-keeper, for the entry of a young woman into the War Office was in those days considered to be highly irregular. I had not seen Zahiré for over a year and was delighted to meet her again. While in Beikos I had found out that she was married and I was able to get her husband out of serious trouble. An officer in a cavalry regiment which had joined up with Mustafa Kemal, he had apparently deserted from his regiment in Anatolia and come to Constantinople. When I was in Beikos he was in hiding for he feared arrest though whether on account of having served the Kemalists or of having deserted from them I could not make out, nor I believe could he. In any case I had secured a pardon for him. Now he was under arrest again and Zahiré tearfully asked for my help. It was awkward, but I really could not resist Zahiré and agreed to meet her husband in a small café off Bavazid Square while he was out on parole. We duly met, but I gathered that Zahiré had come to me without her husband's permission and he was not pleased about it. He told me that the situation was now quite changed and that my intervention would only make matters worse. He was very likely right here and I was glad not to have to take any action. He was eventually court-martialled but acquitted and went back to the arms of his lovely Zahiré.

Living in the Turkish quarter afforded me excellent practice in speaking Turkish and especially during the month of Ramazan. Although even in those days few Turks kept the fast at all strictly, the evening gun was the signal to begin jollification and feasting which usually lasted until the morning. The streets were gaily lighted up all night, and theatres, circuses and fun-fairs did a brisk trade. It was impossible to sleep for the noise so we used to go to the theatre and walk about the streets until the small hours of the morning. In this way I got an enormous amount of practice in colloquial Turkish and had now got to the stage of being able to understand quite a fair

proportion of "Ay Dede," a comic paper edited by the clever journalist, Refik Halid Bey. I could now read the newspapers without much difficulty and could write a letter without fear of a breach of etiquette. I was still, however, very far from being a first-class interpreter, as my knowledge of scientific terms and legal phraseology was gravely deficient. I was to make considerable progress in this side of the language during the following year.

While working in the War Ministry, I used to interpret a great deal for C—and especially during a curious campaign started by Allied Headquarters for collecting funds for the Turkish Red Crescent Society. It was announced as a non-political move which made it quite certain that everyone regarded it as made from political motives. The general impression caused was, indeed, that whereas the British had been comparatively neutral, so far, in the matter of the Graeco-Turkish war, they had now decided that the Turks were going to win and that some benevolent gesture should be made. C—and I, accompanied by a Turkish officer, visited all the big shops and business houses in Stamboul and asked for subscriptions to the fund. Nearly all gave for though none, including the Turks, believed in organised charity, it was still considered to be a good thing to humour the British. We only met one honest man so far as I remember. He was an Armenian cloth-merchant and he explained quite coolly that he was an *Armenian* who subscribed heavily to *Armenian* relief organisations. He did not see his way to subscribing for Turks who, he believed, were entirely responsible for the plight of his fellow-countrymen. "Tell him he's a damned swine," roared C—, with true British logic. I told him C—was sorry he would not subscribe and we left.

Altogether I only stayed six months in the Turkish War Office. The Commission was a solemn farce. The Turks were not disarming. On the contrary, the principal work carried on by the War Office was that of organising the supply of munitions to Mustafa Kemal's army. It was an open secret, or so it seemed to me but others seemed to think that the Minister for War at least was "loyal," that is, that he was a traitor to his country and, for some obscure reason, loyal to us. I fear he was no traitor but playing a difficult hand for the Turkish Nationalists with no ordinary skill.

The last few months in Constantinople before the evacuation were of great interest and moment. When I first went to

Allied Headquarters, I went to live on the other side of the Bosphorus at Moda and used to come over every day in the steam-ferry. Greenhill of the National Bank of Turkey, Chaytor, the most generous Gunner and the best Intelligence Officer I ever met, and myself lived in a private house in great luxury and comfort. We had to spend the whole day in Constantinople but usually got back in time for a bath and profited greatly by the hospitality of the British residents in the evenings. In Constantinople, meanwhile, the situation was becoming extremely disagreeable. The Greeks had collapsed politically and might collapse militarily at any moment. The Turks were truculent and offensive and the Authorities not quite so "loyal" as they had been. The French and Italians were now pursuing a pro-Turk policy for which they had, no doubt, good reason. Our own attitude was from a moral point of view, a sincere one and I believe we were as neutral as it was possible to be.

During the time that I was at Allied Headquarters, I got very little practice in speaking Turkish though I was steadily improving my knowledge of the written language. Every now and then I was sent for to interpret either for General Harington or for other officers. Interpreting for General Harington was easy for his ideas were clear and he had evidently studied the art of speaking through an interpreter. With others it was by no means so easy. Even though very senior they had not always a proper notion of arranging their ideas and would fire off strings of technical expressions quite impossible to render into Turkish. On one occasion I had to interpret for an officer who was interviewing the Prefect about the repair of certain roads. The first thing that I had to ask the Prefect was what official was responsible for the adjudication of tenders for contract. I had no conception of what this meant and said so. "Don't bother about what it means," said the officer who was very senior indeed, "All I want you to do is to translate what I say."

The political and military tension was somewhat relieved by the Conference of Mudania but was later revived during the Lausanne negotiations so brilliantly concluded by Lord Curzon. Looking back, I see that I was too close to the situation properly to appreciate its potentialities. My work was of a specialist character and the impressions I received were not unlike those of a man trying to read a book through a telescope. What I saw was vastly magnified and seemed clear, but it was difficult to correlate these spasmodic glimpses with other aspects of the

situation. By rubbing shoulders with many different races, however, I think I sloughed off that partiality for one or another people which I had felt during the early part of my stay in Turkey. As I learnt Turkish better and associated more with the Turks, I began to understand to some extent the Turkish irritation against the Greeks and Armenians. Indeed, after living in the Turkish quarter I became almost "turklenmish" and it needed some further study and experience to perceive that where the Greeks appeared to be to blame, the real villains of the piece were the so-called Allies who were being propelled by I know not what ill-advised or ill-intentioned politicians. What added fuel to the fire was the fact that the Spirit of Nationalism had everywhere raised its head. The Greeks, encouraged by the Powers in their "megali idhea" had brought about the rebirth of Turkish patriotism. The Turks in their oppression of Armenians and Kurds had invented the Minorities problem.

My last months in Turkey were spent at Arnaoutkeui on the Bosphorus where I lived in a large Turkish house right on the edge of the water. My companions were Heywood and O'Leary, two interesting and clever Gunners. Of Heywood I saw but little as he was Chief of General Harington's Staff and extremely busy, but O'Leary and I were kindred spirits over the matters of languages (he is one of the best linguists in the Army), Jane Austen's novels and Constantinople night-life. I have long ago forgiven him for playing Scriabine's Preludes before breakfast. At night we would often go out together, sometimes to Bebek where there was a delightful open-air restaurant and cabaret run by Russians or else to one of the many resorts in Constantinople. There was always good music and good dancing and an abundance of good food and drink. I saw some curious things in those days and the remembrance of them made me wonder a little at the righteous indignation displayed in High Places when someone ventured the remark that the behaviour of the British Army of Occupation had not, on the whole, been exemplary. The behaviour of the rank and file was, so far as I could see, good. Every now and then there was a scuffle in Galata but the cause was usually high spirits combined with a certain amount of drunkenness and was easily excused by all. The Italians themselves could see the funny side of the defence of the British sailor who, having knocked down an Italian officer, pleaded that he had understood his victim was trying to sell him a certain kind of postcard.

My few months' stay at Arnaoutkeui was a fitting end to my sojourn in Turkey. The peculiar beauty of the Bosphorus must be seen to be understood. There are those who say that the romance of Turkey has passed with the fez and the *charshaf* but, in my opinion, nothing but extensive building could rob the Bosphorus of its at times almost eerie charm. The black masses of towering cypresses, the medieval castles, the swiftly flowing current and the long-drawn-out cries of boatmen still remain and I believe they have more to do with the genius of the place than the dignified fez and the shrouded figures of women haunting these ragged cemetries on Fridays.

Something more about the Turkish language must be added. The philological and etymological side of the language have been ably dealt with by those competent to do so. I propose merely to add a few general remarks which may not be within the scope of the experts.

Turkish in some shape or form is spoken from the Great Wall of China to Albania. I have used it to advantage in Belgrade and North-East Iran. It has two main forms: (*a*) Ottoman Turkish, spoken with slight variations all over Turkey and until recently the official language of Iraq, Syria and Palestine where Arabic is now taking its place. (*b*) The Tartar dialects of the Caucasus and Turkestan. The language is everywhere substantially the same but there are great differences in pronunciation and in words of common use. The oldest form of Turkish spoken to-day is, I believe, Jagatai Tartar used by a dwindling race, the Tekké Turkomans. Jagatai has many resemblances to Ottoman Turkish but it is exceedingly difficult to pronounce ("gelengyonk"—"thou comest not," I could never quite manage). A Constantinople Turk, be he ever so intelligent, could not get further with the Tekkés than asking for the bare necessities of life. Nor could he manage much better with Uzbegs, Sarts, Kirghiz or Kalmucks, all of whom speak Turkish of a sort. For any one who wishes to learn Turkish as a lingua franca for use over Turkestan and Northern Iran and Afghanistan, the best form to study is what is called Azerbaijani Tartar which has its cultural home in Tabriz or perhaps in Baku. This dialect is the half way house between Ottoman Turkish and the pure Tartar dialects of Central Asia. It is written in both the Arabic and Latin characters and has a considerable literature. Army Headquarters, India, until quite recently used to send officers to Constantinople to learn Ottoman Turkish which, it is to

be feared, would be almost if not quite useless in any country in which the Indian Army might reasonably be expected to operate in war. It is as if one were to learn Spanish in view of the possibility of one's going to Italy.

There is an important movement on foot in Turkey to reintroduce purely Tartar words in place of the many Arabic, Persian and European words which have passed into the language. To many this seems as likely to succeed as the reintroduction of Irish but some headway has been made in Turkey, largely by the use of compulsion. However much Ottoman Turkish is "tartarised" it will, in my opinion, remain distinct from Azerbaijani Tartar and, of course, still more so from Eastern Turki which embraces the dialects of Turkestan. The pronunciaton of Ottoman Turkish remains the same, smooth, harmonious and balanced as opposed to the strident gutturals and open vowel sounds of the Tartar dialects, which, in addition, often violate the rules of harmony which are such a feature of Ottoman Turkish.

To read some modern Turkish books and periodicals one would imagine that the language had undergone a radical change. It is true that the adoption of the Latin character and of punctuation has greatly simplified Turkish, both for the Turks and for foreigners. A number of new words have been introduced, especially into the military language, but one has only to listen to Turkish broadcasts from Ankara to realise that the language is still substantially the same. If it was ever the intention of the authorities to banish the Arabic element they have so far had little success. The Arabic element in Turkish is still as great, if not greater, than in modern Persian.

A few more words must be said about books. I have not yet seen a satisfactory and up-to-date English-Turkish Grammar. Moise Bey's "Méthode Turque" contains the best treatment of Turkish in a European language (French) which I have ever seen. If there is a modern edition of this book in the new orthography then it is the one to get. For those who know Italian, "Metodo Teorico-Pratico di Lingua Turca Moderna" by Padré Francesca da Scandiano (Hoepli, 1932) will prove a safe little book for elementary study. Another excellent book for beginners is "Inductive Turkish Lessons" by Frank Field Goodsell (American Board, Istanbul, 1931). Those who know Russian will find the Turkish-Russian Dictionary by D. A. Magazannik (Soviet Encyclopædic Press, Moscow, 1931) by far the best dictionary. There are several small Turkish-French and Turkish-English dictionaries on

the market. A most useful book to get hold of is "Iyi Zevceler," an admirable translation of Louisa Alcott's "Good Wives." The private study of Tartar dialects presents some difficulty for English students, though a hunt in Luzac or Foyle's shops will produce more than one old phrase-book or grammar. Plenty of Russian or Persian books for the study of Azerbaijani Tartar can be obtained in Tabriz.

[*Note.*—As far as possible, the new Turkish Orthography has been used in the writing of Turkish words. Owing to typographical difficulties, however, I have had to use English phonetic substitutes for such letters as 's' cedilla and undotted 'i.']

THE HISTORY OF GURKHA RECRUITING

By Captain W. J. M. Spaight

RAISING OF GURKHA REGIMENTS

The first three Gurkha units of the Indian Army were raised on the authority of a General Order dated 24th April, 1815.

At that time the Nepal war was still in progress. On account of continual Gurkha raids into British India and the occupation of certain lands in the Gorakhpur District by Gurkha troops, hostilities broke out in May, 1814. For reasons not unconnected with the climate the actual declaration of war was, however, delayed until the 1st November, 1814.

During the winter, 1814-15, five separate columns attacked the Nepalese forces. The preliminary operations were not successful. On the 16th April, 1815, however, General Ochterlony's column defeated the Gurkha General Amar Sing Thapa at Deothal, near Malaun in the Simla hills. On the 25th April, General Jasper Nicholls captured Almora. Amar Sing Thapa capitulated at Malaun on the 15th May, 1815, and peace negotiations were opened with the Nepal government. The negotiations broke down in December, 1815 and the war continued until the Peace of Segowli, signed on the 4th March, 1816.

It will thus be seen that the Gurkha units were formed at a time when war was being waged against Nepal. The exact reason for the formation of these corps is difficult to ascertain. It is, however, probable that when they were authorised, the intention was to enlist hillmen resident in the war zone who were hostile to Nepal, and that after the surrender of the Gurkha armies west of the Sardar River, disbanded Gurkhas were accepted. Disbanded soldiery, if neglected, frequently turn their hands to armed robbery and it is possible that disbanded Gurkhas were enlisted in these units in order to prevent dacoity.

The Gurkhas had conquered Kumaon in 1790 and finally subdued Garhwal in 1803. The Nepal rule in these areas was therefore sufficiently recent to suggest that there must have been large numbers of subjects of the deposed hill Rajas hostile to the Gurkha *raj*.

The Gurkhas had also raised local levies from amongst the population of the conquered districts:

> "In 1814 quite two-thirds of the Nepalese forces in the west were composed of men from the upper parganas of Kumaon and Garhwal. These levies were not, however, incorporated with the regular troops, but were considered in the light of local militia, and were as a rule under the orders of Gurkha officers, though Kumaonis occasionally were entrusted with small commands."*

The Indian Army List states that the regiments were raised from Gurkha soldiers who took service with the British after the fall of Malaun, or the first phase of the Nepal war. Yet the order authorising their formation was published some weeks before the fall of Malaun. Therefore the original intention, in all probability, was not to enlist Gurkhas at all. The composition of these corps must have been very mixed.

> "During the close of the first phase of the Nepal War, 1814-15, numbers of disbanded Nepaleses soldiers came over to the British side; and these together with prisoners and wounded recovered in our hospitals, and certain irregular troops were formed into four Nepalese irregular corps."†

The original composition of the Kumaon Battalion, (1/3 G. R.) is given as:

> "(*a*) Enemy subjects, *i.e.*, disbanded Gurkhas, etc., who joined the British after Ochterlony's victory at Deothal.
>
> (*b*) 300 Oudh and Palpa men from Gorakhpur who had been employed by the British against the Nepalese.
>
> (*c*) Some Gurkhas and others who entered our service after the fighting round Almora."‡

The four corps were based in the areas in which they had been raised. The two Nasiri Battalions (1/1st G. R.) in the Simla hills, the Simoor Battalion (1/2nd G. R.) in the Dehra Dun area and the Kumaon Battalion (1/3rd G. R.) in Kumaon.

In a general order dated 6th May, 1823, the four units are graded as Local Battalions. The duties of a Local Battalion, as laid down in this order, were: "the service and defence of the Provinces or Districts in which they were formed" but they were, on emergency, liable to active service in the field.§

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* "Handbook on Garhwalis," p. 36.
† Hist., 2nd G. R., Pt. 1, p. 1.
‡ Hist., 3rd G. R., p. 9.
§ Hist., 1st G. R., p. 10,

Both the Nasiri Battalion (1/1st G. R.) and the Simoor Battalion (1/2nd G. R.) took part in the successful siege and assault on Bhurtpore in 1826. Otherwise the three units (the 2nd Nasiri Battalion was disbanded on 1829) carried out duties of a police nature until the Sikh War.

REGIMENTAL RECRUITING IN BRITISH INDIA, 1815—60

By the Treaty of Segowli in 1816 Nepal surrendered all her recent conquests. This decision had been forced upon her by defeat in war. The Kathmandu Government was therefore by no means on friendly terms with the British and a recurrence of war was a distinct possibility until Maharaja Jang Bahadur came to power in 1846.

It was, therefore, not possible to send recruiting parties into Nepal. All recruiting had to be done inside British India. This practically, confined recruiting to the districts of Kumaon and Garhwal or the sons of serving and pensioned soldiers.

> *Kumaon.*—"In the early days recruiting parties were not allowed into Nepal and wandered about the border attending fairs. Recruiting seems to have been done by parties wandering up and down the Sardar (Mahakali) Valley and in Kumaon—which still had a number of Gurkha families residing in pre-mutiny days. Many Garhwalis and Kumaonis of good stamp were enlisted."*

The Kumaon Battalion (1/3rd G. R.) remained in Kumaon from 1815 until 1850, when both the Simoor Battalion (1/2nd G. R.) and the 66th or Gurkha Regiment (1/1st G. R.) did a tour of duty there. At the outbreak of the mutiny the 66th were stationed at Almora. In 1857 the Extra Gurkha Regiment (1/4th G. R.) was raised at Pithoragarh in Kumaon. The 25th Punjab Infantry or Hazara Gurkha Regiment (1/5th R. G. R.) was raised at Abbottabad in 1858 but obtained its recruits mainly from Kumaon.

> "In October, 1858, the first recruiting party was sent out, not to Nepal, be it noted, but to Kumaon. The recruits enlisted were Gurkhas, Garhwalis and Kumaonis, each class in approximately equal numbers. Many years were to elapse before the regiment confined its efforts to the recruiting of Magars and Gurungs of Central Nepal."†

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* Hist., 2nd G. R., Pt. I, p. 73.
† Hist., 5th R. G. R., p. 8.

During this period there must have been a large number of Kumaonis and Garhwalis in the ranks of all Gurkha regiments. The actual Gurkhas enlisted were probably either from the Gurkha colonies in Kumaon or from the Western Districts of Nepal—Doti, Bajhang, Bajura Raj, Talahara and Jumla. Men from these districts are never enlisted nowadays; though large numbers of men from Doti migrate into India to obtain work as coolies. There are still (1939) said to be 1,500 Gurkha families living in the Pithoragarh sub-division of Kumaon.

Line Boys.—"The progeny of Gurkha soldiers who are born and brought up in a regiment are called line boys. Properly speaking the use of the term should be so confined, but it is nowadays loosely used to denote any Gurkha who has been born and brought up in British India."*

In these early days it was the policy of Government to encourage the formation of Gurkha colonies in India. Colonies were formed in Kumaon and at Dehra Dun.

"In 1859 an attempt was made to start a Gurkha colony (in Abbottabad). A small area of land immediately north of cantonments was bought by Government in the hope that a portion of the men of the regiment, with their families, instead of returning to Nepal on completion of their service, would take up a part of the colony land and make their home there."† The colony was not, however, a success; partly owing to the poor quality of the land.

The line boy acquitted himself well in the Gurkha regiments. "Reid (the commandant of the regiment during the mutiny) eulogises the fine feelings of *esprit de corps* and pluck evinced by the 'line boys' of whom he could cite many examples ... out of 25 men who obtained the Order of Merit for Delhi (1857) 12 were line boys, while of 7 who received the Order for Aliwal (1846) five were line boys."‡

It would appear that when Prithwi Narayan of Gurkha brought the hill tribes of what is now Central Nepal under one ruler—Circa 1770—many fighting men, who had previously been engaged in internecine quarrels, were released for other employment. From 1770 till 1816 the energies of these warriors were

* "Handbook on Gurkhas" (1933), p. 124.
† Hist., 5th R. G. R., p. 8.
‡ Hist., 2nd G. R., Pt. I, p. 58.

employed in aggressive wars against near-by states. The whole of the hills on the south side of the Himalayas, from Bhutan in the east to the Sutlej in the west, were conquered by Gurkha armies. When, by the Treaty of Segowli, Nepal was confined to the area between the Mechni and the Sardar rivers another outlet was necessary for this surplus man-power.

In similar circumstances the clansmen of Scotland had migrated to America after the disarming of the Highlanders had been carried out by General Wade in 1725. The only outlet for the unemployed soldiery of Nepal was in India. Many Gurkhas descended to the plains to offer their services as mercenaries. Ranjit Singh, the Sikh ruler of the Punjab, raised several Gurkha units, some of whom at one time formed his personal bodyguard. Gurkhas also enlisted in the irregular corps formed in the Punjab after the Sikh War, 1845—46.

The 25th Punjab Infantry or Hazara Gurkha Regiment (1/5th R. G. R.) was raised, in 1858, on a nucleus of Gurkhas transferred from the 1st, 2nd, 3rd and 4th Sikh Infantry, The Guides, Punjab Infantry and Punjab Police Battalions. The majority of the men came from the Guides and the 2nd Sikhs.*

Gurkhas also overflowed over the Eastern border of Nepal into Assam. The 1st Assam Light Infantry (1/6th G. R.) absorbed two companies of Gurkhas from the Sylhet Battalion in 1828.†

The Assam Sebundy Corps (2/8th G. R.), which was raised in 1835 at Gauhati, Assam, included a considerable number of Nepalese from Eastern Nepal who had taken service in the former Assam Sebundy Company.‡

The numbers of Gurkhas living in British India have increased in recent years. The result of the 1931 census shows that, at that time, there were 384,138 Gurkhas living in British India, over 180,000 of whom were in Bengal. These figures are said to be almost certainly an underestimate. The majority of these belong to the fighting classes.§

It is not easy to discover to what extent Gurkhas domiciled in India were enlisted during the War of 1814—18. The 1/10th Gurkhas carried out some recruiting in the Gurkha *basties* of the Shan States and obtained some useful recruits. The depot of the regiment was at that time in Burma.||

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* Hist., 5th R. G. R., p. 8.
† Hist., 6th G. R., p. 12.
‡ Short Hist., 2|8th G. R., p. 3.
§ "Handbook on Gurkhas" (1933), p. 159.
|| Hist., 1|10th G. R., p. 106.

In recent years line boys have been very sparingly enlisted. This is due to the change of opinion on their usefulness. It is certain that the Indian-born Gurkha deteriorates but it may well be that this change of opinion is partly due to the fact that the material now enlisted in Gurkha regiments is superior to the pre-mutiny recruits and that the line boy suffers by comparison.

During this period, when enlistment was carried out within the limits of British India, Gurkha units were present at Bhurtpore, 1826, Aliwal and Sobraon, 1846, and Delhi, 1857.

REGIMENTAL RECRUITING IN NEPAL, 1860—86

In 1857, after the capture of Delhi, the Government accepted the offer made by the Nepal Government to assist in suppressing the Sepoy Mutiny. Maharaja Jang Bahadur in person led a large Nepalese contingent which took a prominent part in the final capture of Lucknow. The Nepalese contingent also operated independently against the Mutineers, recapturing, amongst other towns, Gorakhpur. For this invaluable service a considerable portion of the Nepal Terai, which had been taken after the War of 1814—16, was returned to Nepal. Relations between the two countries improved and recruiting parties entered Nepal proper. From 1858 to 1886 there were five battalions of Gurkhas. Recruiting was carried out under unit arrangements. It would appear that commanding officers had a certain amount of liberty to choose recruiting area and the class enlisted.

The Army in India had taken over more stations in Northern India and there were not many cantonments near the Nepal border from which recruting parties could operate. Gorakhpur was the most convenient station near the border and it became the main recruiting centre for Gurkhas. Purneah, in Bengal, which was also well placed, was abandoned as a military station in 1859.

> "Since the 'sixties Gorakhpur had been continually used as a central recruiting station, it being near the Nepal border and a cantonment with Medical officers, etc. In October 1867 a recruiting party under Lt. Battye was sent to Gorakhpur. It enlisted 100 excellent recruits."*

The 5th Gurkha Regiment also sent a strong recruiting party to Gorakhpur in 1878, as one of the preparations for the 2nd Afghan War.†

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* Hist., 2nd G. R., p. 73.
† Hist., 5th R. G. R., p. 34.

It is reasonable to suppose that the use of Gorakhpur for regimental recruiting parties was the cause of the large-scale enlistment of Magars and Gurungs in Gurkha regiments. Before the 'sixties Gurkha regiments were of very mixed composition and it is probable that Magars and Gurungs were sparingly enlisted. These two tribes form the majority of the population in the Gandak Basin, which lies in the Nepal hills North of Gorakhpur. Fourteen Gurkha battalions are now recruited exclusively from these two tribes.

In addition to the Gurkhas enlisted into the five Gurkha battalions, other corps also enlisted a proportion of Gurkhas. The Assam Regiments contained a large number of Gurkhas, probably Eastern Nepalis. The 43rd Assam Light Infantry (2/8th G. R.) in 1862 had an authorised proportion of three-quarters Gurkhas. Occasional recruiting parties were sent into Nepal to obtain these, though normally all recruiting was carried out locally in Assam.*

In 1865 the 42nd Assam Light Infantry (1/6th G. R.) had four Gurkha companies.§

An official description of the troops in Assam in 1880 states that the 42nd Light Infantry had a strong Sikh element, the 43rd Assam Light Infantry was mostly composed of Assamese; but both contained a good many men from Hindustan. The 44th Sylhet Light Infantry (1/8th G. R.) was practically a Gurkha corps.‡

It would appear that Government controlled the numbers of men to be enlisted from Nepal. "During this year, 1880, all recruiting was carried out through Gorakhpur and the recruitment of Gurkhas was confined by the Government of India to the Gurkha battalions only. From 1883 to 1885 the 43rd was stopped from recruiting men west of Kathmandu and therefore had to enrol a proportion of their recruits by sending parties *via* Darjeeling and Segowli. From 1885 onwards all recruiting was concentrated on the parts of Nepal west of Kathmandu."†

The 9th Bengal Native Infantry (1/9th G. R.) in 1881 enlisted some Newars from Nepal.||

During this period Gurkha units took part in numerous Frontier expeditions and in the 2nd Afghan War. They were prominent at the storming of the Peiwar Kotal and the Battle of Ahmed Khel.

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* Short Hist., 2/8th G. R., p. 4.
† Short Hist., 2/8th G. R., p. 7.
‡ Short Hist., 2/8th G. R., p. 7.
§ Hist., 6th G. R., p. 23.
|| Hist., 9th G. R., p. 19.

CENTRAL RECRUITING IN NEPAL, 1886—1940

In 1885 fear of war with Russia led to an increase in the Army in India.

> "The Panjdeh crisis, when war seemed imminent and a force of 65,000 men was mobilised by the Indian Government, led to the immediate increase of the Indian Army by 10,000 European and 20,000 Indians."*

It was decided by Government to raise second battalions for the five Gurkha regiments. Definite orders for their formation were issued in February, 1886. During the same year the 42nd and 43rd Assam Light Infantry and the 44th Sylhet Light Infantry became class Gurkha regiments. The numbers of Gurkha units was thus increased from five to thirteen battalions.

> "Negotiations were entered into with the Nepal government by which they opened Nepal more to our recruiting parties and permitted the enlistment of numbers of Nepalese sufficient to supply a second battalion for the 1st, 2nd, 3rd, 4th and 5th Gurkhas. In exchange for these men a large number of service rifles were presented to the Nepal Darbar, together with a large monetary consideration. During the winter (1885) Colonel Beecher was sent to Darjeeling to report on the facilities for recruiting along the Eastern border of Nepal, and so relieve the congestion anticipated at Gorakhpur, which for many years had been our only depot for collecting Gurkha recruits."†

> "In 1886, however, when second battalions were raised for the first five Gurkha regiments, sanction was accorded for the establishment of a Gurkha Recruiting Depot at Gorakhpur. It is interesting to note that this depot was the first of its kind to be established in India; and it was its success which eventually led to similar organisations being formed for the recruitment of other classes in the Indian Army. Before 1885 no arrangement with regard to recruiting appears to have been made with the Nepal Government

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* Sketch of History of India (Dodwell), p. 94.
† Hist., 2nd G. R., Pt. I, p. 105.

and recruiters were obliged to smuggle their recruits across the border as best they could."*

"Up till 1888 cases of recruiters being ill-treated in Nepal were of common occurrence, but thanks to the firmness of our Residents and the broad-minded policy of successive Prime Ministers such cases are now seldom heard of, and recruiters are allowed to carry on their work unmolested."†

The Gurkha Recruiting Depot was opened during the winter months only. In 1887, however, all troops were withdrawn from Gorakhpur. In consequence the depot was allowed to demolish the Artillery bazaar buildings, in which they had been accommodated, and to build huts with the débris. The depot continued to function in Gorakhpur until 1903 when, owing to an outbreak of plague, it moved nearer the Nepal border at Pharenda. In 1906 the depot returned and a site was obtained at Kunraghat, three miles from Gorakhpur on the banks of the Ramgarh Tal. This site was occupied in 1910. Whilst the present depot was being built the recruiting establishment lived in tents near-by.

The recruiting procedure adopted was similar to the present one. Each battalion sent serving soldiers to act as recruiters—one recruiter for every two or three recruits required. These recruiters, based on the depot, made trips into Nepal bringing out prospective recruits. These were passed by a recruiting officer and a medical officer. Recruiters were provided with a distinctive recruiting duty pass—printed in both English and Nepali. Rejected recruits were given a small allowance for the journey back to their homes.

Owing to the fact that the recruiting area in Nepal is badly served by roads and bridges it was impossible for men to come down during the monsoon period when flooded rivers are often impassable. From Gorakhpur the Terai belt had to be crossed. Malaria is prevalent in the *terai*. Recruiting was therefore confined to the winter months. The Nepal Government have now constructed a motor road from the British India railhead at Nautunwa to Batauli. This enables men to cross the *terai* in one day.

It is doubtful if a European has ever visited the Gurkha recruiting area in Nepal. The handbooks on the Thums and

* "Handbook on Gurkhas" (1933), p. 128.
† "Handbook on Gurkhas" (1918), p. 148.

villages in Western and Eastern Nepal have been compiled by recruiting officers from information received from serving soldiers and pensioners.

Newars.—In 1893 it was proposed to make the 9th Bengal Native Infantry (1/9th G. R.) a class Newar Battalion. On the advice of the Recruiting officer (Captain Vansittart), however, Government decided to enlist Khas Gurkhas, (Thakurs and Chettries) instead. The 9th Bengal Native Infantry became a class Gurkha regiment in 1894.* The Newars from Nepal are not now enlisted, though during the War (1914—18) some were taken. In Nepal the Newars form the trading class.

Garhwalis.—Until 1887 Garhwalis were enlisted in Gurkha regiments. In 1886, when second battalions were being raised for the five Gurkha regiments, the Commander-in-Chief, Lord Roberts, decided that one of them should be a class Garhwali battalion. The second battalion of the 3rd Gurkha Regiment was chosen. The 3rd Gurkhas were serving in Burma at this time so the 2/3rd Gurkhas were not raised until 1887. This battalion was raised on a nucleus of Garhwali soldiers transferred from every existing Gurkha unit. In 1891 this battalion became the 39th Garhwal Rifles and the present 2/3rd Gurkhas were raised.†

Eastern Nepal Recruiting Depot.—A recruiting depot was opened at Ghoom, near Darjeeling, in 1890.

In 1895 the 10th Regiment (1st Burma Rifles) Madras Infantry (1/10th G. R.) became a class Gurkha regiment, composed of Limbus and Rais from Eastern Nepal; though until 1905 other classes continued to serve.‡

In 1902 the 8th Gurkha Rifles (1/7th G. R.) was raised with a composition of Limbus and Rais. A second battalion was raised for both the 6th and 9th Gurkha Rifles in 1904. A second battalion was raised for the 7th Gurkha Rifles in 1907 and for the 10th Gurkha Rifles in 1908.

Thus at the outbreak of War in 1914 there were ten regiments of Gurkhas, each of two battalions. Of these, sixteen battalions were enlisted from the Western Nepal recruiting depot at Kunraghat—fourteen Magar and Gurung and two Thakur and Chettries—and four battalions from the Eastern Nepal recruiting depot at Ghoom—Limbus and Rais.

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* Hist., 9th G. R., pp. 19 and 23.
† Hist., 3rd G. R., p. 53.
‡ Hist., 1|10th G. R., p. 16.

The Great War, 1914—18.—During the Great War, 1914—18, third battalions were raised for eight of the Gurkha regiments—the 4th and 10th Gurkha Rifles did not raise a third battalion—and a new regiment, the 11th Gurkha Rifles, of four battalions, was raised. The numbers of Gurkha battalions thus increased to 33. The 3rd Gurkha Rifles raised a fourth battalion. Recruiting was carried on throughout the year. As well as providing men for the Gurkha regiments many Nepalis were employed in labour and other corps.

> "The number of men taken out of the country (Nepal) since the outbreak of war had exceeded 200,000. When it is recollected that the bulk of these men came from the martial classes, of which the total male population, according to the census of 1911, amounted to 907,000—from which total those who were too young, too old or physically unfit must be excluded—it can be seen to what extent the country had been denuded of its manhood. Fifty-five thousand of these were enlisted in the regular Gurkha battalions of the Indian Army. Nepal suffered some 20,000 casualties on our behalf."*

As was to be expected, this enormous increase in recruiting caused the standards of various regiments to be relaxed. Eastern Nepalis and Khas Gurkhas were accepted into the Magar and Gurung regiments.

In the 6th Gurkha Rifles:

> "The custom of the regiment to enlist only Magars and Gurungs had to be dropped for the time being. By the end of the first year there was almost every class of Gurkha to be found in the ranks of the regiment—Khas, Chettri, Limbu, Rai, Sunwar, Lohar, Magar and Gurung."†

It must be remembered that the population of the Eastern Nepal recruiting area, from which only four battalions are normally recruited, is almost as great as that of the Western area.‡ Extensive recruiting was also carried out from the Western districts of Piuthan, Sallyan and Dullu Dailekh which in peace-time furnish few recruits.

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* "The Gurkhas," by Northey and Morris, pp. 266-67.
† Hist., 6th G. R., p. 149.
‡ "Handbook on Gurkhas" (1933), p. 158.

CONCLUSION

Though the class and type of man recruited into the Gurkha regiments of the Indian Army has varied from time to time, it is an interesting fact that their reputation in war has always been high. At the storming of Bhurtpore (1826), in the battles of the Sikh War and during the Mutiny, Gurkha regiments, composed almost entirely of classes no longer enlisted, distinguished themselves notably.

During the interim period when the present classes were beginning to be enlisted Gurkha regiments gained fame at the storming of the Peiwar Kotal and the Battle of Ahmed Khel.

In the Great War Gurkhas fought on many fronts. At the end of the War, in the 1919-20 Waziristan Operations, when regiments were composed of a high percentage of young soldiers and when classes were mixed, the behaviour of the Gurkha regiments at the Ahnai Tangai was beyond praise.

ARMOURED LORRIES

By Major D. H. J. Williams

From time to time, in articles in the Journal, remarks have appeared on the question of armour plate protection for lorries. As a rule this has been with reference to conditions on the North-West Frontier. The question is one which one has heard discussed by officers on this frontier frequently. It is one which could not fail to receive attention in a Corps such as the South Waziristan Scouts. A good deal of consideration was given to the subject some eighteen months ago, and it might be of interest to describe what has since been done in the matter.

It was decided that armoured lorries could only be accepted if they could be used as general purpose vehicles, for men or supplies as might be required. From the administrative point of view, a lorry which is a specialised type, not available for general purposes, is undesirable.

Bullet-proof plate may be very desirable, but it is heavy. Unless the performance and carrying capacity of the vehicle is to be seriously impaired, the result of any armouring problem must be a compromise between protection, speed, and useful load.

The necessary bullet-proof plate for us was ordered from England in December, 1938. It was only received some seven months later, a month before the outbreak of war. The plate is five millimetres, which is proof, at the normal angle of impact, against the service .303 bullet. Five millimetres is appreciably less than a quarter of an inch. It will be understood that plate of only this thickness, capable of stoppng a .303 bullet at short range, must be pretty tough. In order to minimise drilling operations here, it was in consequence obtained ready drilled from the works. A certain amount of additional drilling was required in fitting up the lorries here, but not very much.

The sketches and photographs with this article will give an idea of the layout of the vehicles, and the armour protection provided. Insufficient bullet-proof plate was received to complete all the armouring required, and certain items were made up from ordinary steel plates with a "sandwich" of hard wood between them. The thickness of mild steel and wood necessary was, of course, determined by test. In two cases a single mild steel plate has been used, where the thickness of a steel and wood "sand-

wich" would have been inconvenient. The fact is accepted in these cases that the plate may not be proof against the right-angled strike of a bullet at very short range.

It will be seen that most of the armour is built into the vehicles and is not visible. The only exceptions to this are the windscreen-shutter, a side-shutter above the door by the driver's seat and one exterior plate on the bonnet. It was not essential to conceal the protective armour in the structure of the vehicle, but it was convenient. In hot weather it is an advantage, as the plate is not exposed to the direct rays of the sun and an insulating layer of wood outside it keeps down its temperature. The protective plate on the bonnet was purposely fitted outside. It can be speedily removed and thus allows easy access to the engine. The folding shutters over the front door of the lorry, and the adjustable windscreen-shutter, enable it to be used as an ordinary open vehicle when tactical considerations do not dictate otherwise.

It will be noticed that, with the side-shutters and windscreen-shutter closed, the driver has quite a good degree of protection from either side or from the front.

Above the line of the main body armour, running the full length of the lorry, he has little protection directly from the rear. To be candid, however, he is well protected by the bodies of his passengers from this direction, and only a very lucky shot could render him *hors-de-combat*. If supplies form his load he is just as well protected. With an empty lorry he might be unlucky.

The roofs of these lorries have not been armoured in any way. When men form the load, their kit is carried on the roof and gives some degree of protection. If supplies form the load a portion can be carried on the roof for the same purpose.

All fittings used in the construction of these armoured lorry bodies had, of course, to be designed and made in the Corps workshops. In consequence, they had to be as simple as possible, such as any blacksmith-fitter could turn out, and, at the same time, be effective. The various fittings required a certain amount of consideration. An armoured door, for instance, measuring some three feet by two, cannot just be swung from anything, with a few screws and a bazaar hinge.

The weight of the armour with necessary fittings totals about fourteen maunds. Some sixty or seventy maunds can be carried without overloading, so this amount is not excessive. But for the fact that the lorries are required for operation in hilly country,

on roads up to 7,500 feet, the weight of armour might have increased. A normal load works out more or less as follows:

Armour	14 maunds.		
20 fully equipped men ...	40	,,	
Kit (say) ...	8	,,	*Total* 62 *maunds.*

Alternatively,

Armour	14	,,	
Stores	50	,,	*Total* 64 ,,

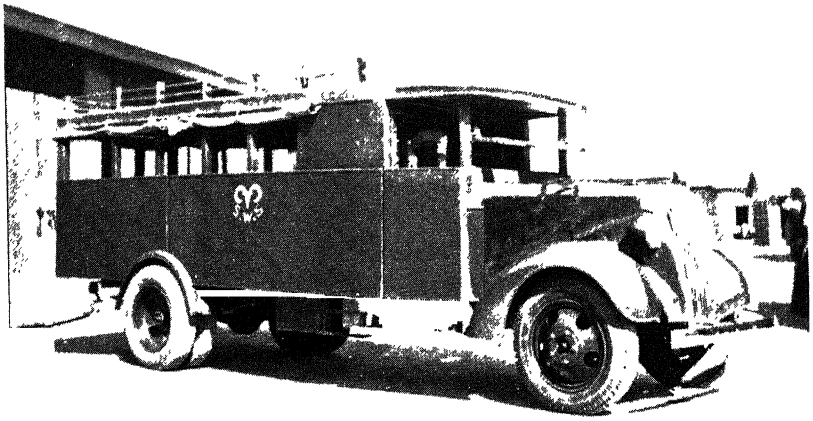
With these totals the vehicles can travel comfortably on the flat at 35 M.P.H., which is a very reasonable speed. I have myself driven them for hundreds of miles, and they travel quite nicely at 50 M.P.H. with a load of about forty maunds. Not that I advocate this speed as a general practice. Twenty-four men is the maximum who can be carried, but this is overcrowding though not overloading. The passenger seats are so designed that they can be lifted straight out and carried on the roof, to provide a clear space for rations or stores.

The exits from the lorry are three. Double doors at the back and a door on each side of the driver's seat. It will be seen from the drawings that passage way is provided on either side of the driver's seat to these doors, from the rear of the lorry. It will also be noticed that these doors hinge from the rear—a method which facilities entry or exit.

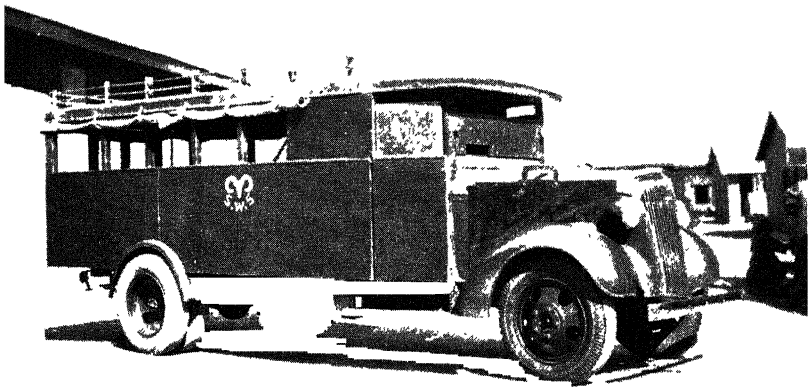
Turning for a moment to the sketches, I should like to mention a few points about them.

Sketch 1.—This shows the armoured areas of the lorry from the side. Except where it is required to cover the driver and the petrol tank, the main armoured portion does not come down to the floor level of the lorry. A belt of plate runs the full length of the lorry at seat level. Seated passengers are thus given body protection, but their feet and heads are not covered. Considerations of weight alone governed this layout. The men were not long in evolving a proper technique to deal with this problem. Heads disappear with unanimous rapidity whenever sniping starts on the roads.

Sketch 2.—This shows a general plan of the lorry layout, principally seating arrangements and exits. A comparison with the first sketch will give an idea of how far the driver is protected towards the rear. I refer to head protection, and protection against a degree of "plunging" fire, which the higher level of the armour in this part of the lorry affords.



Armoured lorry with shutters open.

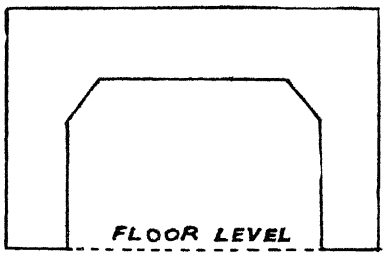


Armoured lorry with shutters closed.

Sketch 3.—This is an attempt to show the armoured areas of the lorry, when viewed directly from the front. It is not altogether successful, as I found the exact distribution of armour difficult to represent from this angle. It should be remembered that the bonnet of these lorries narrows a great deal in width towards the front. Plates, such as the exterior plate on the bonnet and others, follow this narrowing line of the bonnet, and so give protection when viewed directly from the front.

The radiator shutter works on the Venetian blind principle, the extent to which it is closed being controlled from the driver's seat. This shutter is not proof against the normal angle of strike of a bullet at short range, it is only mild steel at present. However, it is proof at various angles and for a right-angled strike at longer range.

One of the most important pieces of bullet-proof plate, the dashboard armour in front of the driver, does not appear well in this sketch. Its "legs" rise from floor level. The front armoured doors close against it on either side, and the windscreen-shutter, when closed, slightly overlaps the top of it. Its shape is:



The driver is provided with a slot in the windscreen-shutter at eye-level. The present slot is more than adequate when the shutter is closed, and could have been reduced in size a bit. The shutter itself can be adjusted to any angle up to fully closed, by a simple fitting within reach of the driver's hand.

Two photographs of a lorry with side and windscreen-shutters open and closed, also accompany this article. The vehicle shown is a 1937 Chevrolet chassis. Most of these armoured bodies have now been transferred to 1939 chassis, and the sketches are based on these. There is little alteration except that the driver sits an inch or so lower relative to the armour, and thus has greater protection from "plunging fire." The radiator end of the 1939 chassis is also somewhat different in design, a fact which necessitated a number of alterations in fitting them up.

So much for the sketches and photographs. Our object has been to construct a general purpose lorry which would—

(*a*) Give a good degree of protection to the driver, petrol tank and engine.

(*b*) Some degree of protection to the passengers. The vehicles have been on the road for about six months now, and the bodies have not shown any sign of weakness. They have been sniped on numerous occasions, but only one or two ineffective hits have so far been recorded.

Now that the job is finished, I think we could have used thinner bullet-proof plate in certain places.

Without going into the full details of the immunity thickness of proper bullet-proof plate at various ranges and various angles of impact, I may say that 4.5 mm. is immunity thickness at 100 yards for a normal angle of impact. In the case of these lorries some of the 5 mm. plate is built into the structure, and lies between layers of wood planking. I think it possible that we might have reduced that plate by half, or perhaps even one millimetre. A reduction of half or one millimetre thickness of plate may not seem worth worrying about. On this job, though, it would have represented an additional five to ten square feet of armour plate available for the same weight. This could still have been utilised with advantage.

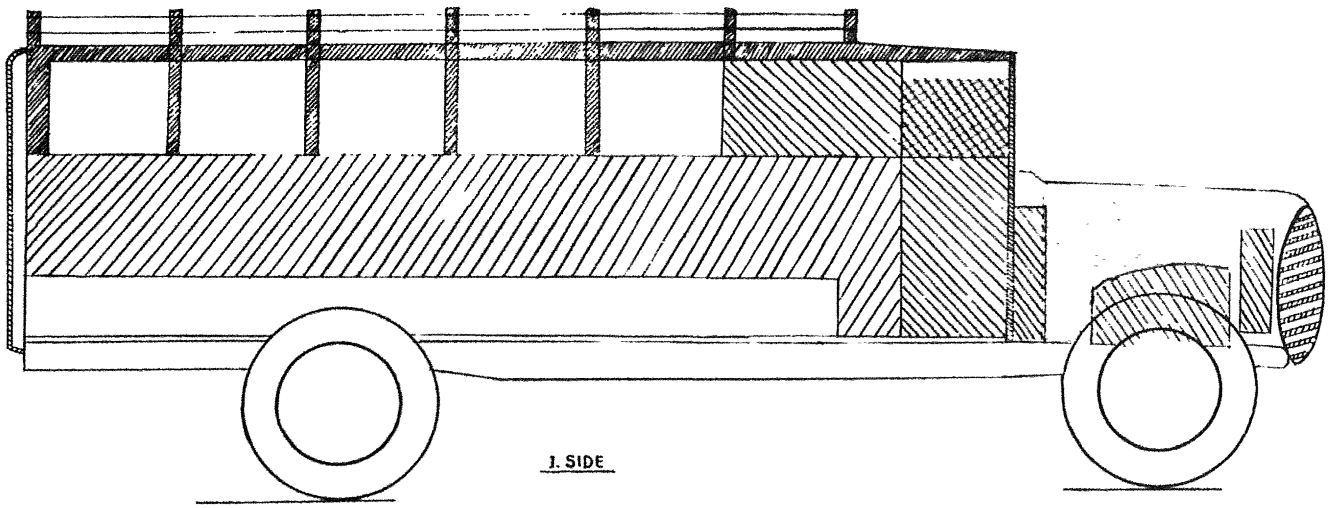
The vulnerability of men in ordinary lorries on our most unpeaceful "roads of peace," has been shown on more than one occasion in recent years—quite recently on the Kohat—Bannu road. On this last occasion, a platoon in two lorries were reported to have lost six killed and fourteen wounded in a few minutes. One cannot think that such losses would have occurred immediately, in a type of partially armoured vehicle here described. We, at any rate, hope that it will not occur.

NOTE

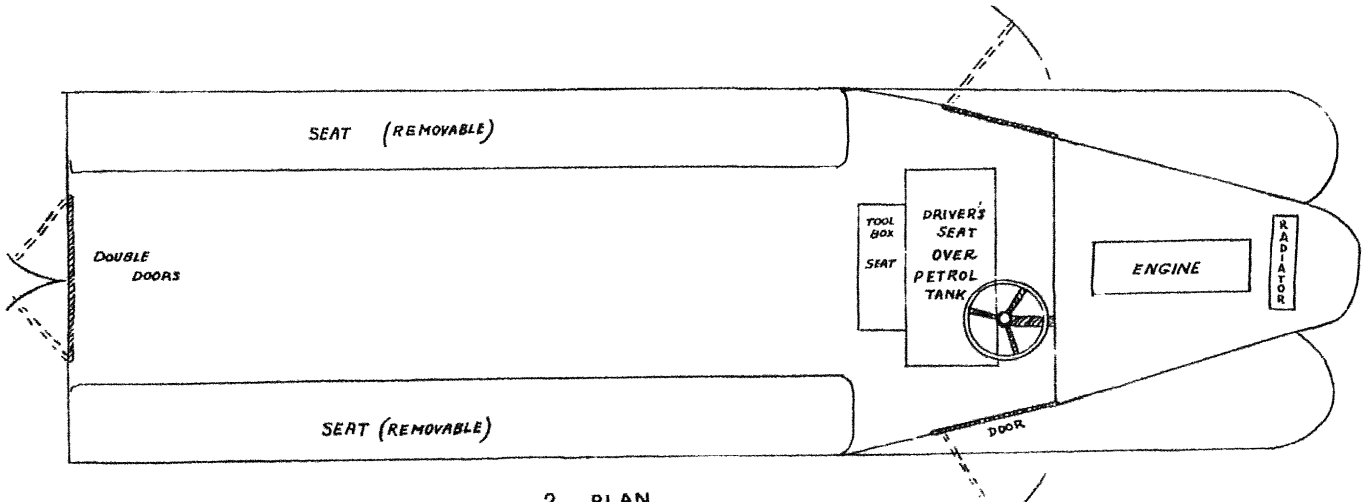
Since the above was written, three of these armour-protected lorries, carrying forty men, who formed an escort, were involved in a close ambush on the Jandola—Sararogha road. A gang of some eighty mixed Mahsud, having seen the lorries pass up the road towards Sararogha, laid the ambush to catch them on their return.

No road block was made. The reason for this was, of course, that the ambush was intended specifically for the Scout lorries.

SOUTH WAZIRISTAN SCOUTS CHEVROLET LORRY.
(ARMOUR PROTECTED)



1. SIDE



2. PLAN

Stones would have formed the only available material just there, but that would have stopped local lorry traffic and would have risked spoiling the show. The gang concealed itself carefully in depth on either side of the road and waited, while privileged spectators from the locality publicly occupied a convenient natural grandstand some five hundred yards from the spot.

The lorries passed through under very heavy fire. Three men were slightly wounded. Little was seen of the ambushers, though the fire of a few men at close range was returned. The lorries were struck by eighteen bullets, and a bomb. Subsequent examination of the armour plate showed that a good proportion of the hits had been made at ranges of less than fifty yards. Most of the close-range shooting was directed at the front half of lorries, in other words, at the engines and at the drivers. There were in fact no hits towards the rear of the vehicles, I should say in the last eight feet. One bullet only caused minor damage to an engine. This shot, fired from below road-level and slightly from the front, passed below any protective armour. It holed the casing of a timing gear pinion immediately in front of the cylinder block. This, however, had no effect on the running of the engine.

I was interested to observe, also, that the windscreen-shutter, composed of a sandwich of mild steel and wood, stood this unsolicited test with success.

"BLACK HORSE ROCK"

By Ronoco

It happened many years ago whilst I was serving with the South Waziristan Scouts, and where we captured him was in the broken hilly country just north of the entrance to the Shahur Tangi—a few hundred yards below and east of Entrance Piquet.

We were at the time advancing downstream in the direction of Chagmalai with the intention of establishing a Scouts' Post there, and with me I had some four hundred men of the Sarwekai garrison, some of whom would ultimately be used to garrison the new post.

The day was hot for it was the month of June and the mid-day hour just passed, and we had been marching since shortly after dawn. With luck we should make Chagmalai within the hour, that is if the Gods were kind to us and all went well, for we were working in the land of the unseen eye where every error made was paid for in the price of blood.

Although commanding the column, at the time I had dropped back to the rear-guard to see that all was well as the tail of the column cleared the Tangi, and that the rearmost piquets got away without becoming seriously engaged.

The permissive signal to retire had been given to a piquet high up on the hills to our right, and an acknowledgement received by flag, and we took up covering positions to support the piquet down. As it withdrew and had reached a point about twenty yards from the evacuated sangar a sudden burst of fire was opened on the piquet from close quarters.

This piquet was composed of three men and an N.C.O.—all Adam Khel Afridis bred and born to rugged and rocky ground such as that we were operating over at the time. Nothing new to them this barren land of prodigious curves and crests, nor the hidden hand of death which lurked amongst the rocks and tried to reach them as they moved over the territory he called his own. Was not a like toll exacted from them in their own distant lands bordering the Kohat Pass? Had they not been reared since childhood on the border system of blood feuds which many times had proved to them that the eye, the ear and the trigger finger were the guardians of their lives?

What had they to fear in such natural surroundings even had they been further removed from the long column of men they could see below them in the *nala*—a snake-like column moving slowly and keeping parallel to the river—a column of their own blood—the Scouts.

When the firing started I yelled to Jim, who was my second in command, to stand by to support me, and taking a platoon of men I dashed down the *nala* bank, across the stream, and started off up the hillside in the direction of the firing. Before we had crossed the *nala* which lay between us and the foot of the hill I had seen my Adam Khel piquet charging back to retake the sangar, and had breathed a silent prayer of thanks that none of them had been hit as I had seen all the four men. It didn't take us long to reach the sangar as we had rushed the hill in extended order, but once we got there all we could discover was one dead man, obviously a Mahsud, inside the sangar walls. Of my Adam Khels there wasn't a sign. Possibly they had rushed on and past the sangar in their eagerness to come to grips with the enemy. There had been no further firing except for one short burst delivered soon after the piquet had been fired on and before the Adam Khels had regained the sangar—possibly they themselves had returned the fire. Maybe by now they had all been knifed in the very broken ground the other side of the crest—better push forward and see.

After making arrangements for covering fire for our further move forward we advanced over the crest and down the slope the other side but could still see nothing of the Adam Khels. Why no signal as they had been taught to give under like circumstances? Were they all dead?

"Look, sahib, a man, a shout." Yes—further down the hill there's a man waving furiously. He's one of my men too. Detailing a section as a layback I set off down the hill with a few men in the direction of the waving man, and on approaching closer I discovered that there was with him another man of the piquet. I asked what all the noise was about and if any of the men had been hit, and in reply was informed that so far as they knew no one had been. I was told that the piquet commander and one other man had disappeared further down the hill chasing an unwounded Mahsud, but that their special quarry at the moment lay under the huge table-sized rock at our feet.

I was invited to look for myself, and glancing down to the base of the rock I saw the legs and feet of a man protruding, and

by the side of them a rifle butt, the remaining portions of both being hidden under the rock.

"That man is dead," I was informed, "but there is another man alive well in under the rock." "Tell him to come out," said I, "or else we'll put a grenade under there to help him make up his mind," although I knew only too well that we were minus grenades that day.

Apparently my smattering of Pashto had been understood by the inhabitant of the rock for very soon afterwards a voice was heard as if from inside the rock itself saying, "If I come out you'll kill me, and if I don't come out you'll still kill me, so what am I to do?"

It required no great conflict of emotions to supply the answer, and after a little while out came our hero, tall and gaunt and eagle-eyed, defiant to the last. "Now do your damndest," was all he said.

I asked him what he was doing under the rock and who his pal, now dead, might be; but all he replied was, "I know nothing of this man. I was walking this way when I heard the sound of firing and being unarmed I took cover under the rock. Scarcely had I reached the rock when that man, badly wounded, ran down the mountain side, and I called to him to shelter under my rock. He is now dead and that is his rifle." It is true there was only the one rifle between the two men, nor did a second rifle come to light though we searched the ground exhaustively. I got from him his name and tribe but no amount of cross-questioning could shake him in his denial of having taken any action that day against our troops. No, not even the threat of instant death which was handed out to him as a matter of course.

We then took out the strings of his pyjamas, and with them tied his hands together behind his back, at the same time telling him to hold on well to his pyjamas and that when we were ready we would take him along with us to Chagmalai. Not often did the Scouts bring prisoners home, although they captured many, for were not these men our enemies, and would not mutilation debar them from the Kingdom of Heaven? In any case the Political, even after the dangers of the hunt and the capture, would probably set them free.

Soon afterwards the missing N.C.O. and man joined the group and from this N.C.O. I learnt the full rate of the morning's happening. He said that shortly after he and his men

had evacuated the piquet position they were fired on by four men from the piquet position itself, and turning round they returned the fire and rushed on the position. The enemy must have been lying up close to the position from early morning, and hidden in the rocks which were massed all over the ground. By their fire they had dropped one man in the piquet position and had badly wounded another, but two unwounded men had got away and over the crest, one, followed by the wounded man, making down the right-hand slope and the other the left. He had given orders to two of his command to chase the men who had gone down the hill to the right whilst he and the other man had followed him to the left.

He had failed to put his man in the bag but undoubtedly, he said, the dead body and the stranger now in our midst were the two who had made off down the right spur.

Instead of praising him for his dash and initiative I just cursed him thoroughly for not examining the near-by ground before taking up his original position, but that was a way we had in the Scouts, and the men themselves knew there would be appreciation to follow.

Later on that morning we arrived in Chagmalai and there handed over our prisoner to the political representative, and in due course I returned to Sarwekai—to forget about the rigours of our recent dash to Chagmalai, and to cease to wonder what might have happened to our hero—now that he was in political hands.

Quite frankly I believed that long since he would have been released and that maybe I should run across him again some day walking innocently over ground from which we had been sniped. If so we would forget about the Political and take the law into our own fair hands.

Three weeks later I was to hear the tale of the Black Horse Rock when I arrived in Dera Ismail Khan in answer to a summons demanding my presence there to give evidence for the prosecution in a case against Khabul Khan. For the life of me I couldn't imagine who this Khabul Khan might be or why I had been subpenaed to give evidence against him. Could he possibly be the big fat lout I had pulled off his donkey going up that steep incline a week or so ago and who vowed he would get even with me yet?—or maybe a relation of the poor unfortunate who ran into a Scout ambush near Sarwekai a day or so ago? Surely in either case I would have little to do with the prosecution.

I was to learn the following morning who this Khabul Khan was, when I attended the political court, and saw there in the dock our hero of the Shahur Tangi affair. He was on trial for his life, and in his defence he told in quiet and pleasing Pashto tones the following story—a tale of the Black Horse Rock:—

I am Khabul Khan, a son of the Gugi Khel who inhabit the lands to the north of Sarwekai and whose territories extend to the east as far as the Black Horse Rock and my village is that of Ahmedwan which lies at the foot of the Jalel Algad. I grew to manhood there and was respected for my prowess among the sons of the Gugi Khel. Life was hard but I was happy until I took to wife Gul Jahan, a daughter of the Shaman Khel, who are renowned among the Sons of the North for the unsurpassed beauty of their women. Nor was Gul Jahan but a sample of the daughters of the Shaman Khel—she was beautiful more than any, but resentful at being sold and made to labour for a son of the Gugi Khel. We were happy for a time, a world unto ourselves, and none more proud of his possessions than Khabul Khan, but it is written that pride goes before a fall.

It is written also that woman is the serpent and that her beauty is as the night-dew which deceiveth the flowers in the morning, and soon I too was deceived and found cause to hang my head. Better far that I had found companionship among the daughters of my own tribe, and not of the Shaman Khel.

Gul Jahan spent longer at the water than was her wont and many times she was not there to minister to my needs when I returned with my herds at the hour of the setting of the sun.

For long I suspected her fidelity and then one day at evening time I returned alone, leaving my herds grazing on the distant hill-sides, and hid close to the watering-well where the village women drew for their needs, and with my own eyes did I perceive what is about to be related here.

Soon before the setting of the sun that day did Gul Jahan, when the others of her kind were busy at the well, hide her water-pot in the near-by bushes, and take the path which leads to the east in the direction of the Black Horse Rock, and in her hand she carried something small.

She stopped every now and then and glanced behind as is the way of those who are afraid or who go forth to carry out a task of shame, but her speed was as that of the mountain-goat who runs from rock to rock and then takes stock of his ground to see that all is well. But I followed close, taking cover in the

shadows cast by the rocks, for the sun was not yet set and the shadows were long.

Arrived at the Back Horse Rock which stands alone on the edge of the plain—a landmark and a refuge for the outlaw and for those who pass that way—Gul Jahan advanced to the side of the stream which flows within a stone's throw of the Rock, and there depositing the thing she carried, sat down to wait. I then advanced to the Rock and hid myself in its folds and prepared to see what she would do.

No cause had she to suspect that she was followed and in her innocence she played with the stones which lay at her feet. Not long afterwards and whilst it was still light, I perceived a lone horseman approaching across the plain from the east, and drawing nigh he greeted the woman and led her to the outer face of the Rock, not more than two paces from where I lay with, knife in hand, ready to avenge myself of the insult which had been hurled against the honour of my house.

"Your food is brought," said the woman as he got down from his horse and seated himself on a stone besides the Rock, and she opened up the thing she was carrying and placed it before him on the ground. "Woman, go down to the river and bring me water that I may wash my hands before partaking of the food," was all he replied. Now was my time come, and when the woman had gone I leaped on the man and with but one quick slash his head rolled at my feet. Nor did I recognise the man but his clothes were of the Shaman Khel. Picking up the headless body I quickly tied it on the panting horse by means of the reins, and then I struck the horse and made him scurry off in the direction whence he came—and all this time the woman remained hidden in the folds of the ground between the banks and the river, nor did she hear anything except maybe the galloping horse, as no sound was uttered when I did this thing.

When the woman returned and saw no one there but, on the sands the head of the man she had left but some minutes before, she cried aloud with fear, and gathering up her skirts she ran like the deer along the path which led back to Ahmedwan. No need for caution now as the dusk had come, so setting the lifeless head upon a pinnacle of the Rock that all might see, I went down to the river and performed the ablutions prescribed for those who have taken life, and then I went my way back by the path taken by Gul Jahan.

Neither that night nor for long months afterwards did I give cause to make the woman suspect that it was I who shared her secret, and in the meantime she bore her burden well but she was afraid of the dark. It was the hour of the coming of darkness when her lover was slain, and maybe daily at this hour her thought of him would return, and remain with her until the coming of the day. No longer did she stray from the house as if afraid to forsake the protection of its walls, and I was given little cause to complain of my lot even though she continued to treat me with disdain.

It was many moons after that, when the short days had come round again and she and I were sitting on the steps in the courtyard of our village home. It was again the hour of dusk.

I said to the woman, "Go inside and bring me out my *huqqa* that I may smoke." And then the terror seized her such as I had never seen before, for jumping up she cried, "I'm afraid to go into that room—it is dark inside." Then did I lose my manhood and my self-respect for in anger I replied, "Ah! You weren't afraid to go forth to the Black Horse Rock on the night there was no moon." At this time only did she suspect, and picking up a spear which lay there on the ground besides the steps she rushed at me and screamed, "So, *you* were the one who did it, and may Allah give me power to square the deal!" I could have strangled the woman without much ado but her screams brought the men of the village from their resting places, and seeing a woman attacking a man, they killed the woman, and then turning to me they asked, "Why did you make us kill our own sister?"

Now that the woman was dead and my honour avenged, why should more blood be spilt in so unworthy a cause? Should I take refuge by admitting the cause of the quarrel between the woman and me and thereby admit even my own dishonour? No, sahib, this is not the way of the Pathan.

Taking up my cloth, I said, "Peace be on you, my brothers —I am no more," and, stepping down from my house, I passed through the gate as the stars were appearing in the sky.

"Starre mashe!" (May you never be tired!) they cried to me as I went forth, and in salute I replied "Quar mashe" (May you never be poor!), for is this not the salutation in adversity as well as in wealth?

That night I wandered south by the road which leads to Splitoi, and was in the hills of the Shahur Tangi when the firing started and I hid under the rock. Of the cause of the firing I know nothing, and I am innocent of the charge. This is the story of Khabul Khan.

May I meet you again one day, Khabul Khan, to hear you say that what you then spoke was true, and that your life was wrongly forfeited to the ends of so-called justice. Not that your life mattered much even to yourself but, all the same, your bearing and your words, to me, savoured of the truth.

PETROL CONSUMPTION

By Major C. Mc I. Delf

Petrol is to the mechanised force of to-day what grain and hay have been to past armies. But there is one big difference. Animals in an emergency can be worked for a short time without food, and for a rather longer period they can very often carry on with such food as the country affords. The motor vehicle without fuel is useless. It is the purpose of this paper to show how much can be done to mitigate this state of affairs by the extraction of the maximum mileage from each gallon of fuel put into the tank. Care by all concerned can improve a vehicle's fuel consumption by as much as twenty-five per cent. It follows that this will lead to a much greater radius of action per tank of fuel in war and very considerable economy in peace. The points dealt with can be grouped under the headings driving, tuning, cooling and fuel quality.

DRIVING

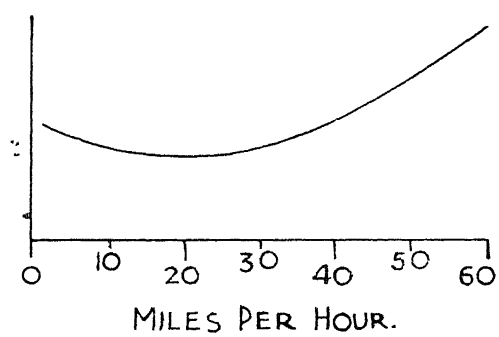
Civilian road transport companies in England pay the greatest attention to their fuel consumption figures. Their profits depend upon them. The human factor plays a large part in getting the best out of the motor vehicle and many firms have introduced a bonus system to encourage their drivers to handle their machines economically. The mediocre driver who finds his more skilful brother getting a higher rate of pay is stimulated to drive more carefully; to avoid violent acceleration, overspeeding, overusing the low gears, waste of petrol when filling up, unnecessary flooding of the carburettor and so on. The naturally bad driver who is so clumsy with his controls that he returns a consistently bad petrol consumption is weeded out. As he is usually accident-prone also, his elimination is doubly necessary.

It is suggested that some such system might be introduced into the service with advantage, possibly by making the driver's proficiency pay contingent on good petrol consumption figures.

Before this can be done it will be necessary for all concerned to be thoroughly familiar with the capabilities of each type of vehicle under varying conditions. In this connection the mileage figures required by the regulations are not much use. They are put deliberately low to allow for expensive conditions, such

as cross-country work in low gears. It must also be borne in mind that a modern vehicle is far less costly to run than the older service vehicles. Great improvements have been made in recent years in carburation and in design generally. Incidentally this is a cogent argument for the elimination of older vehicles even though perfectly sound mechanically.

The speed at which a vehicle is driven determines to a great extent its consumption figures. Another important factor is the quality of the road surface. A standard Norton motor-cycle as used in the service is capable of ninety miles per gallon if not driven at more than forty miles per hour. The same machine if driven at sixty miles an hour for long stretches on the same road and under the same conditions, apart from speed, will give less than sixty miles per gallon. The report of the British delegation which examined the new German roads in 1937 is illuminating on this subject. A six-cylinder car was driven on one of the old main roads at 44.3 M.P.H. at which speed it showed 17 M.P.G. It was then driven on the autobahn at the same speed and its petrol consumption was lowered to 29.7 M.P.G. The speed was then increased to 77.4 M.P.H. and the petrol consumption was increased to 16.75 M.P.G. (Appendix IV of the report). These figures clearly show the very important effect of speed and road surface on consumption. A typical speed-consumption curve for a medium-sized modern car is as follows:



The commander who wishes to get the maximum mileage from his petrol will permit high speeds only when the necessity is paramount. Such occasions are few. The type of road he has to work over is generally out of his control; but it should be borne in mind that to work vehicles in convoy is equivalent, as far as consumption is concerned, to operating over bad roads. Convoy work entails frequent stopping and starting, excessive use of low

gears, baulking on hills, the idling of engines for long periods and many other ways of wasting petrol. It follows that convoys should only be used in cases of military necessity. Where there is a choice between protecting a road and running a convoy it is far better to protect the road and allow each type of vehicle to run along it at its own most economical pace. To achieve this successfully demands a high standard of traffic control and intelligence on the part of each driver.

Care must be taken that there is no coasting down hills in neutral gear. This is the bus driver's way of saving petrol: it leads to frequent accidents.

TUNING

Another important factor in petrol consumption is the condition and the tune of the engine. Very often an engine is perfectly sound in the essentials and yet gives poor results, because it is out of tune. This is sure to be reflected in heavy fuel consumption. The complete tuning of the modern engine is the job of the specialist and as such must be left to the maintenance unit, but the officer in charge of mechanical transport can do much to keep his engines in tune by ensuring among other things that the right types of oils are used, that the plugs are in good order, that the advance and retard mechanism is working properly and that the air cleaner is clean and setting up no restriction.

Recently much research work has been done by the oil companies and this has resulted in engine oils which are more nearly akin to the ideal. The ideal oil is perfectly fluid and free from gumminess at low atmospheric temperatures while at the same time it provides complete lubrication at the highest temperature at which the engine is called upon to operate; or, in more technical parlance, it is an oil with a flat viscosity curve. It is clear that such an oil will render starting in cold weather much easier, especially when vehicles have to be parked in the open. It also improves petrol consumption, for less power is absorbed in internal friction which can be considerable when a thick oil is used. Most modern engines use a grade thinner oil than their predecessors of a year or two ago. Oil consumption may be slightly greater but this is more than compensated for by the better starting and fuel consumption.

Sparking plugs need to be carefully watched. One with a cracked porcelain should be changed at once. The gaps should be as laid down in the maker's handbook. After about ten

thousand miles a plug is past its best; it usually puts fresh life into an engine to fit a new set of plugs after that mileage.

The ignition timing devices of the modern engine are rather complicated. There is usually an automatic advance and retard mechanism working in conjunction with a vacuum control underneath the distributor. These are set in the workshops and the unit commander should confine himself to seeing that lubrication instructions are carried out and that the mechanism is working freely. There is often a third, hand-operated, control known as an octane selector. The question of octane numbers will be touched on later. If an engine knocks badly on the fuel supplied its running can be improved by setting back the selector pointer one or two divisions. This comes to the same thing as retarding the ignition on the older hand-controlled vehicles. A sign of a well-tuned engine is a slight "ping" when the engine is suddenly accelerated.

Air cleaners need careful watching, especially in India, where, with the dust that usually prevails, they soon become choked. A choked air cleaner is worse than useless as it restricts the flow of air to the carburettor. This leads to an excessively rich mixture. The surplus petrol washes the lubricant from the cylinder walls and rapid cylinder wear, which the cleaner is designed to prevent, is the result. Neglect of any of these points is bound to lead to unnecessarily heavy fuel consumption. The smaller the cleaner the more frequently it requires attention.

A careful study of, and attention to, the points laid down by the maker in the handbook which is provided with every type of vehicle is time well spent and will be at once reflected in improved petrol consumption figures. There is sometimes a temptation to attempt to improve petrol consumption by fitting smaller jets in the carburettor. This should never be permitted. Too weak a mixture will need a larger throttle opening for a given speed and this will lead to heavier petrol consumption. Also there is a danger of over-heating and burning out valves.

As is well-known, to obtain the maximum life from pneumatic tyres the pressures must be kept to those laid down by the maker. It is not so well-known that petrol consumption can also be affected by incorrect pressures. During a recent motor-cycle test it is reported that the running of the tyres a few pounds below the correct figure increased the petrol consumption by fifteen per cent.

COOLING

Another way of wasting petrol is to run with an over-cooled engine. It is now accepted that to get the best from a water-cooled internal combustion engine the cooling water should be maintained between 170° F and 180° F. This does not apply to the engines of tanks in which, to cope with extreme conditions, the cooling system is under slight pressure which has the effect of raising the boiling point of the cooling water and thus makes higher temperatures permissible.

The Indian hot weather demands a cooling system which is more than adequate in the cold weather prevailing for half the year in Northern India with the result that, cooling water temperatures may rarely go above 150° F during that season without some antidote. Cooling systems designed for the Indian hot weather are not necessarily suited to the cold weather in Northern India. As a result the temperature of the cooling water may remain below 150° F in the cold weather unless radiators are blanked off. Thermostats, radiator shutters or blanking-off plates are usually provided with service vehicles to meet this situation. The tendency is for the appliances within the driver's control, blanking-off plates and shutters, to be insufficiently used. A vehicle used in the Punjab cold weather on short runs with frequent stops and starts should normally have one if not two radiator blanking-off plates permanently in position.

PETROL QUALITY

The final major factor affecting petrol consumption is the quality of the petrol. This naturally is out of the control of the unit commander. He can, however, protest where he has reason to suspect that a consignment is below standard.

When petrol is supplied in tins there is always the chance of a little water in the tin and this water may cause a stoppage at an awkward moment with a loss of fuel. Tins which show signs of internal rust should be rejected. Petrol which causes severe detonation or "pinking" in an engine hitherto free from it is almost sure to be of poor quality; it may even be contaminated with kerosine. Compression ratios have increased very considerably in recent years. This has set up a demand for fuels of a higher octane number or better anti-knock value. In America much use is made of lead derivatives as it is found that their addition to petrol raises its octane number considerably.

That frequent cause of stoppage on hill-runs in the hot weather, "vapour lock," is very often due to petrol of poor quality. Such petrol in order that it shall be capable of starting the engine readily is "doped" with exceptionally volatile fuels. These fuels separate out as gas in an over-heated fuel pump and interrupt the flow of petrol to the carburettor. This explains the bus driver's remedy which is to pour cold water over a cloth wrapped round the pump. All petrols are mixtures of several hydrocarbons and the lighter fractions are liable to evaporate if petrol is left lying in the tanks for some time. This loss by evaporation can be considerable, especially in hot weather. It is minimised by keeping tanks full, thus limiting the surface area in contact with the air. If the escape of the lighter fractions is considerable the petrol left may be incapable of starting the engine. In England it is customary to supply two grades of petrol, for winter and summer running. The former contains a higher proportion of the lighter fractions to ensure easy starting. In Northern India where temperature variations are exceptionally wide there is a definite need for two grades of petrol.

To sum up: the four major ways in which a Unit Commander can extract the maximum fuel mileage from his vehicles are by demanding the highest possible standard from his driving personnel; by ensuring that his engines are always in good tune and run at the optimum temperature; and by watching the quality of the petrol supplied to him. It is suggested that the achievement of the first can be helped by making pay and promotion depend upon it, the second and third call for close co-operation with the maintenance unit as well as study of instruction books, while the fourth is a matter for liaison with the supply authorities.

Attention to the question of petrol consumption will lead to a high standard of efficiency and motor-mastership as well as to economy and will well repay the detailed work which it involves.

O'REGAN PREPARES FOR WAR

By F. M. M.

[*Being letters from 2nd Lieutenant Michæl O'Regan, the newest-joined subaltern of 1st Bolton Irish (Territorials), to his brother Pat.*]

My Dear Pat,

One of the most important things in the Army is discipline.

For instance, you remember Billy Mooney, the dirty lying little squirt that lived near Mountjoy. Well, he's a Major in this battalion, if you please, and if he's fit to be a Major, then I'm fit to be a General. But every morning, when he comes riding on to parade, I have to salute him and say "Goodmorning, Sir." But the minute his back is turned, I say to myself "May you fall off that flaming horse and break your silly neck." Now that's real discipline, Pat.

And then there are any number of other kinds of discipline.

For instance, the Commanding Officer, when he was lecturing us on Discipline, a few days ago, explained that he expected us to display the strictest discipline when we were on parade or wearing uniform, but that he wanted us all to be good friends at all other times.

Well, the next day, when I was passing the Bull and Eel, I heard singing and shouting, so of course I looked in, just to see what was happening. There was Private Murphy, drunk as a Lord and singing "The Mountains of Mourne."

Unfortunately he saw me and shouted "Come along in, Mr. Mike, and join the party." Being in uniform I couldn't accept and I almost felt I should have taken some action in the matter. But, there you are, Tom is one of the Lisnaleake Murphys and they've always been decent quiet folk, except when they have drink taken. So, on the way home, I decided to get into mufti and then we could all be good friends together.

So I changed and went back to the pub and a very good evening we had.

At midnight I hailed a taxi and, with considerable difficulty, got Tom into it. I let him sing the whole way home, until we got near the barracks and then I gave him a good hard upper-cut under the chin, just to keep him quiet when we were passing the Quarter Guard.

All would have been well, if I'd only hit him a little harder. But, just as I was explaining to the Guard Commander that I had baggage in the taxi and wished to take it to my quarters, Tom poked his head out of the window and said, "Sergeant of the Guard, I've brought a drunken officer safely home for you. Kindly make him comfortable for the night."

Now the real point about discipline came out the next day.

When Tom was brought before the Commanding Officer he pleaded "Guilty" and merely said "I'm sorry, Sir, I fell in with low company last night;" and the Sergeant of the Guard swore that Tom had crawled on all fours up to the gate and had been arrested.

Neither of them said a word about me and, even if Tom did wink, as he was being taken away to the cells, it just shows you what discipline will do.

Finally there's Mess Discipline. The Adjutant explained to me that one must not mention a woman's name or talk about politics or religion in Mess. So that's finished me. For what else, in the name of heaven, is there to talk about?

Last night was my first Guest Night and we gave the Snipeshires, a Regular Regiment, a slap-up dinner.

Well, you'll hardly believe it, but Dick Leonard is in the Regiment and we could have had a grand old chat, if only I could have talked about Molly. In fact, once I forgot and mentioned her name, and Major Corbett turned round and said, "Mr. O'Regan, I distinctly heard you mention a lady's name." Dick roared with laughter and said, "No fear, Sir, Molly's an old mare of mine."

Well, it saved the situation, Pat, but I wouldn't refer to my sister as "an old mare," not for a thousand Major Corbetts.

After dinner, the junior officers sat round and laughed whenever a senior officer made a joke. By heaven, Pat, I knew most of their stories before I left school. But the first time, when I didn't laugh, the Adjutant whispered in my ear, "Laugh, damn you."

"Well, the big noises cleared off about 10-30 P.M. and then the fun began.

One of the Snipeshires said that the Irish Rugger team was no good this year. "Come on," says we, "and we'll show you."

Off came our jackets and back went the furniture and, with a cushion as a ball, we had one of the best games I've ever played in.

We weren't doing too well and the Snipeshires had just kicked a goal, over the back of a sofa, when who should appear but the Colonel. "Boys," says he, "don't let me intrude, I'll referee."

I saw the glint in his eye and well I remembered his rushes when he was leading the Irish pack.

He stuck it for about five minutes and then, when the Snipeshires scored again, in he came. Man dear, it was grand to see him. In no time the Snipeshires were scattered to glory and the scores were level. With a smile on his face he said "Gentlemen, I bid you goodnight, as my overalls are bust."

Is it any wonder that we'd do anything for old "Tiger" White? He may give us hell all day, but he knows when to be human and that, Pat, is the secret of good discipline.

Au revoir to you, Pat. I hope the wheat is still standing, after all the rain there's been.

Your loving brother,
MIKE.

MISCELLANEOUS SERVICE NOTES

ARMY

The Indian Army Contingent in France

During December the first contingent of the Indian Army consisting of animal transport units of the Royal Indian Army Service Corps together with the necessary supply, medical and and veterinary personnel for their care and maintenance, were sent to France where they arrived without mishap.

Special arrangements were made before their departure to provide the contingent with suitable clothing for a French winter. Men and animals have remained fit and have, from all accounts, settled down to their duties establishing amicable relations with the British Expeditionary Force and the French inhabitants of the areas where they are accommodated.

It is thus shown once again that a war can hardly be fought without mules. In the present stable conditions, the long carry which requires a mechanically propelled vehicle is not always necessary. Further, mechanical vehicles cannot approach too close to the forward posts without drawing fire, and as a result the infantry may be faced with long carries of supplies and engineer stores. The mule is quiet, hardy and can move off the roads. The Indian drivers and their mules will therefore relieve the fighting soldiers in France of many arduous and uncongenial tasks.

Other Overseas Forces

The troops in Malaya are now for the most part accommodated in hutted camps. There, as in Egypt, they have been training in the use of up-to-date weapons and equipment including mechanical transport and have passed on to collective training in the types of warfare peculiar to their respective areas.

When Mr. Eden visited Egypt to welcome the Australian and New Zealand contingents, he reviewed the Indian troops and gave them the following message which His Majesty the King-Emperor had entrusted to him to deliver:

> "I appreciate the contribution the Indian Army is making to the war effort of the British Empire, and I know that, as in the Great War, they will prove themselves equal to any demands that may be made upon them."

Indian Territorial Force

The formation of five new provincial battalions of the Indian Territorial Force was referred to in the last number of the journal. These units are not being embodied at present, but will carry out training in the same way as the other battalions did in peace. The number of these units has been increased by a further three which will be recruited in the United Provinces.

Artillery

The Mountain Artillery has now ceased to form a part of the Royal Regiment of Artillery. It remains a separate artillery corps, distinct from the Indian Field Artillery.

Family Allowances

British service and Indian Army officers under thirty are now entitled to a family allowance with effect from the 11th September, 1939. These allowances range from Rs. 60/- per month for an officer with a wife but no children to Rs. 110/- per month for an officer with two children. The measure is not a permanent one but is designed primarily for emergency commissioned and other officers called up for service for the duration of the war only.

AHMEDZAI OPERATIONS

Towards the beginning of February the Government announced its intention of clearing the hostile gangs out of the Ahmedzai salient. Roads are to be constructed so as to facilitate movement of troops in the area. No endeavour was made to conceal the concentration of troops or their intentions. The gang leaders encouraged by Ipi determined to resist.

Four columns were formed. One took up a position on the northern flank of the salient, two on the southern flank north-east and north-west of Bannu, and one on the road Mir Ali—Spinwam along the base.

On the 21st February the two columns on the southern flank advanced. The right hand one moved some distance westwards encountering some resistance and later returned to camp. The left hand column made a night advance from Kurran Garhi and at daybreak, with artillery support assaulted the Gumatti Tangi, where the only road penetrates a very short way into the salient. A Battalion of the Baluch Regiment on the right and a Battalion of the 16th Punjab Regiment on the left soon secured the first hills on either side of the defile: but resistance stiffened

particularly on the right. Enemy ensconced in caves required mountain artillery and two companies of Gurkhas to dislodge them. All objectives were then secured. The main body returned to camp leaving outposts to hold the captured ground. Movement into the salient had been observed before this action: on the following day it was reversed. The two southerly columns now aligned themselves on the road which was pushed forward with slight opposition.

It appeared that the enemy had acquired a healthy respect for these columns and his activities were thereafter directed chiefly against road protection troops on the roads Mir Ali —Spinwam and Mir Ali—Saidgi. The northern column met with no opposition. On the night of the 24th February a frontier constabulary patrol was ambushed in practically the same place at which they had intercepted hostile ration parties on the two previous nights. Heavily outnumbered and running out of ammunition, they suffered considerable loss though some managed to get away.

Since the beginning of March operations have continued according to plan and the road is being steadily pushed forward into the salient. All columns have carried out reconnaissances meeting with little resistance.

The attitude of the tribes on the borders of the salient remains satisfactory and there are signs that the attitude of the inhabitants of the settled districts has begun to improve.

LETTER TO THE EDITOR

THE "NEW" DRILL IN THREES

SIR,

It may not be generally realised that the so-called "new" drill in threes is not really new at all. Drill in three ranks was originally introduced in the year 1826 by Sir Henry Torrens and was retained for many years until ousted by drill in fours so the latest orders are, therefore, so far as we are concerned, merely the revival of an old idea.

Until 1826 drill had been a very simple affair and officers apparently did not take very kindly to the new fangled evolutions, so much so that a periodical of the time, Mr. Buckingham's paper "The Journal," was constrained to publish a skit on the subaltern's troubles in coping with them. The poem is said to have amused everybody at the time and as it has once again become topical and may yet touch a sympathetic chord, it is reproduced below as it appeared in 1826. It was entitled "A Day in Cantonments:"

"Light in the East, top-dugga (1) on the ear,
And hark, the bugle's summons shrill and clear,
Enter Ram-Churrun (2), messenger for woe,
'Top-dugga, sahib'—answer 'Nikal jow' (3);
'Bugle bujata' (4)—'Hum ne soona, nay' (5).
'Hum soona, sahib (6)'—'Nikkul jow, I say.'
Alas! Ram-Churrun, patient, mild Hindoo,
Reckless of angry threats and glances blue.
Still persevering, at a prudent distance,
Urges the fruitlessness of all resistance—
Urges, and would have failed at last,
But that a second loud, unwelcome blast
Floats on the breeze and proves beyond a doubt,
That, nolens volens, master must turn out.
Slowly he rises, with Ram-Churrun's aid,
Habilitates, and canters to parade;
Gropes in the thick dull mist, and having found
His regiment, falls in and marches round.
All hail, Sir Harry! but for thy improvements,
Still should we study antiquated movements,
Still plodding on the old dull trackless way,

Hack at Dundas but every other day,
And revel in a nap, unhallowed leaven
Of sleep, four mornings out of seven.
Now, barring Sundays, every burra bhore (7),
Views us unlearning what we learnt before.
Threes to the right—'Toom kuhan jate ho?' (8),
Threes to the left—'You paugul, ither ao' (9).

(1) Gun fire. (2) The unfortunate sub's unfortunate valet,
(3) Get out. (4) The bugle sounds. (5) I didn't hear it.
(6) I heard it, sir. (7) Early dawn. (8) Where are you going to?
(9) Come this way, fool."

Yours faithfully,
R. M. HALL.

REVIEWS

THE GERMAN ARMY

By Herbert Rosinski

(*The Hogarth Press*: 12*s*. 6*d*.)

In this interesting book the writer gives a brief history of the German army from the time of Frederick the Great to the early part of 1939. He starts with Frederick the Great because he thinks it is from that period that the structure and spirit of the present German army is determined and that the struggles and the miseries of the Thirty Years War had left only this important imprint on the German nation, namely, that they had hammered into it the conviction that war is an inevitable element of human existence.

The main points of interest in the book are: the various methods used to recruit the German army; the status of the officer and his relations to the rank and file; and the strategy which the Germans studied and employed.

In making the army that his son was destined to use, it was one of Frederick William's aims to eject the mercenary element common to all European armies of that period and to make full use of the man-power of his own kingdom. By a system of cantonisation, that is, by making areas responsible for furnishing units with their reserves, he provided a standing army and behind it a reserve of man-power. As time went on, Frederick the Great found he was unable to adhere to his father's principles, partly because he was forced by circumstances to collect trained soldiers in haste, partly because he was afraid of dangerously reducing the man-power of his country. Eventually, his armies contained many foreign mercenaries of doubtful quality who were only held together by the iron discipline enforced by the officer class. Disintegration in nation and army followed the death of Frederick the Great and lasted until the reformers—Stein, Gneisenau and Scharnhorst—pulled the nation and army together in remarkable fashion between the Treaty of Tilsit and the year 1813. The basis on which their reorganisation rested

was the creation among the German people of a love of service and in the individual the will to take upon himself voluntarily the cause of the defence of his country. The result was that by 1813 Prussia was able to put in the field an army equal to six per cent. of the population. It would seem that the growth of the German army marked time until Bismark introduced conscription and lengthened the period of colour service from two to three years, but from then on the German army gradually increased in size up to the outbreak of the Great War. The author gives the credit for the modern resurrection of the German army to Von Seeckt though, as he points out, this reconstruction cannot compare with that carried out by Scharnhorst and his colleagues. The work of the latter was not an isolated act but was part of the national spirit while Von Seeckt produced a *corps d'élite* in which every man was meant to be a leader for the future army. Writing, however, as he did in 1939, the author points out that the German army was then very short of officers and N.C.O.s and that in his opinion it would take several years before this shortage could be made good.

Under Frederick the Great, the Prussian officer became the first citizen in the land and a claim to noble birh rather than merit was the hall-mark of the officer class. The rank and file were looked upon as scum and it was only iron discipline which kept the army together. As a result there arose an unsurmountable barrier between officer and man. This fault was remedied for a time by Scharnhorst, who made merit rather than the accident of birth the access to gaining a commission and to promotion. Once again, however, with the rise to power of the General Staff in the latter half of the nineteenth century, the old fault began to reappear, and by 1914 there was a strict dividing line between officer and rank and file, the full effects of which, it is pointed out, were felt after the failure of the German attacks in 1914. The author thinks that a mistake of the Great War was the granting of commissions to young, inexperienced men and the disregard of the claims to promotion of good N.C.O.s, of whom remarkably few received commissions. In the post-war period Von Seeckt succeeded in attracting the best type of officer and did his utmost to bring them into touch with the rank and file. In the present German army, Mr. Rosinski's view is that the tenets of National Socialism, under which all Germans, willingly or otherwise, are

educated, may have the effect of cementing cordiality and good understanding between officer and man.

The book says nothing about German strategy until the description of the latter part of the nineteenth century is reached. From that time up to the Great War, the principle of mobile Napoleonic warfare, depicted by Clauzewitz and as put into practice by the elder Moltke and Schleiffen, dominated German military thought and was the basis on which their plans were made. In the author's opinion the turning point of the war was the 15th September, 1914, the day on which Falkenhayn decided to stand on the defensive on the western front and by so doing discarded the principles on which German teaching for the last fifty years had rested. There was no one in Germany, he says, capable of realising that Schleiffen had never intended his plan to be an infallible recipe for victory but rather that the idea which underlay it was that it was a particular solution applied to a situation which was in constant need of revision. As the war went on, excessive centralisation grew, which resulted in the reluctance to assume responsibility without orders from above and the curbing of individual initiative in commanders. In the post-war years every effort has been made to eradicate this fault and, amongst other ways, this object has been sought for by including in units and formations a high proportion of supporting arms so that they can fight their own battle and by inculcating the teaching that most of the culpable offence in any situation in war is to do nothing. At present there would seem to be two strategical schools of thought in Germany. The first, and the one favoured by the General Staff, is the conception of a war of long-drawn-out battles with one side eating into the other frontally until it collapses. The second, and this cannot be altogether excluded even when a first-class enemy is opposed, is the lightning war. The latter type, it is pointed out, possibly represents the views of the Nazi leaders rather than that of the army.

In concluding his book, Mr. Rosinski brings out an interesting point. Under Frederick the Great, under Moltke, in the Great War, even under Von Seeckt, the army had always been carefully kept free of political control. But under the Third Reich, war is no longer a military act but a mixture of propaganda, economic and military pressure. The direction of the whole will lie in the hands of the political leader and it may well happen that considerations of a purely military character may not be allowed to play a role corresponding to their real importance. The same difficulty will, of course, face every belligerent but, as the German nation is constituted at present, this mistake may be particularly difficult to avoid.

H. R. J.

HAIG

By Duff Cooper

(*Faber and Faber*: 12*s*. 6*d*.)

This is a re-issue complete in one volume of Mr. Duff Cooper's biography of Haig, first published in 1935. It has arrived at an opportune time, when many will want to read—or re-read—how the last B. E. F. under Haig's resolute leadership won through to final victory.

The life of Lord Haig was "an epic drama of four years and one hundred days. There is also a preparatory prologue of fifty three years, and an epilogue of ten." The prologue is briefly dealt with and rightly so—not that it is unimportant, but because our interest is naturally focussed on the drama itself. This is largely outlined in Haig's own words from his diaries. These records confirm the accuracy of the official histories and add little regarding the operations. They do, however, reveal to us his personal opinions on many of the great problems and his relations with some of the leading men of the day. His views on strategy are given and we see that he was constantly striving in difficult circumstances, for surprise effect and that he welcomed the assistance that science could give as regards new weapons.

The account of Passchendaele is of great interest. Much has been written in many books about this operation. It is now clear from his diary that it was fought for reasons largely out of Haig's control—the alarming state of affairs portrayed by Admiral Jellicoe as the result of the submarine campaign and the vital necessity of giving urgent and substantial help to our allies. The great measure of its success is often slurred over. Enemy testimony on this point is above suspicion and Ludendorff in his war memories dwells at length upon the "tremendous anxiety" of this period. "The impressions I continually received were very terrible . . . . I had not known what joy meant for many a long day."

The account of his relations with the political leaders is of absorbing interest at the present time. The dust and noise of controversy and clashing personalities of that period has now settled—for ever, we hope—but the principles involved should be a compulsory study for all political leaders and all service officers. The services are often impatient with politicians, but their point of view must be appreciated. As the author points out, it is not usually the British way to criticise its army—generals or privates—in war, but the Government is at all times

under a stream of criticism and their difficulties must be sympathetically considered. Haig was shy and tongue-tied in public speech, and there is still much prejudice against eloquent officers, nevertheless the advantages of clear convincing exposition of views and plans to political leaders cannot be over-estimated.

After making all allowances, one is left with the impression that the politicians had the most to learn. The lack of confidence in the military leader and lack of appreciation of the army's efforts, the preference for foreign generals—akin to the British appreciation of musicians with foreign names, and with even less justification—and the instability of view of some of the political leaders were a source of weakness and danger to the cause. The Government constantly sought recipes for winning victories without fighting, or at least with few casualties. Against a great military power, this search was bound to be a vain one. But if the politicians and civilians have most to learn about the relationship which should exist in war between the services and the Government, surely the onus is on the services to do all they can to educate the political leaders, and the more such instruction is undertaken in peace the more efficient will be the direction of our forces in war. It is hopeful to note the developments since the last war in liaison and mutual knowledge between the civilian government and the services. One wishes that they could have been on an even larger scale but there is no doubt that this increase in mutual understanding will prove of inestimable value in the present struggle.

Haig is not revealed as a genius, but most readers will agree with the author's summing-up that "as the mists created by prejudice, propaganda and false witness begin to scatter, the figure of Haig looms ever larger as that of the man who foresaw more accurately than most, who endured longer than most, and who inspired most confidence amongst his fellows."

A. J. M. W.

WARFARE

THE RELATION OF WAR TO SOCIETY

By Ludwig Renn

Translated from the German by Edward Fitzgerald

(*Faber and Faber*: 8*s*. 6*d*.)

In time of war our literature like our luxuries must be rationed, and many volumes have perforce to be relegated with

uncut pages to the top shelf to be taken down, dusted and read after the signing of the peace treaty. At first glance "Warfare" should receive this treatment, but as we get into the book we find much that is of real value at the present moment to all three services. Suffice to say that for war time reading this volume may be likened to the curate's egg.

The author was a regular German officer who fought through the last war as a front line infantry man and later in Spain on the side of the Republicans, where at one time he commanded an officers' school. He is strongly anti-Nazi with deep personal antipathies to individuals on the staff and in high command. It is hard to judge his politics, but to name him a flamingo-hued communist would not be far from the mark. He writes with great tolerance except when dealing with Kaiser Wilhem II, General Ludendorff, the Nazi leaders and the Spanish Republican General, Largo Caballero, when personal feelings obviously tinge his judgment.

The book is divided into three parts, of which the first traces the causes of war from the days of Rome to the present, and shows the various factors that have governed the size and form of armies through the ages. Although written in 1939, the author cannot visualize any agreement between Nazi Germany and Soviet Russia. Pointing out that the only way in which economic exhaustion can be avoided in modern war by a nation lacking raw materials is to link itself with another, rich in these essentials, by conquest or amicable agreement on the basis of equality, he asks "With what country could Germany unite herself for instance?" To this question the answer is given:

> "The Soviet Union perhaps? However the unification of Germany and Soviet Union would be possible only if one of the two countries abandoned its present State form, and that can happen only as a result of war—or revolution."

Perhaps the results of this war can be foretold from the above, and the 'understanding' (it cannot be called an agreement —gentlemen's or otherwise) with Soviet Russia may lead to the downfall of Nazidom, though it may not hasten the triumph of the Allies.

The beginning of Part II is reminiscent of the pre-1914 era when Staff College instructors were termed professors. It compares the various definitions of strategy and coldly condemns

Clausewitz, Delbruck and Moltke for their heresies and schisms. Its academic value cannot be denied, and the historical examples, ranging as they do from the Great Wall of China to the Great War, are interesting. Nevertheless it reeks of the senior wrangler rather than the soldier.

After this we find an analysis of tactics through the ages, and it is here that the curate gets several spoonsful of excellent egg—many of them flavoured with ripe historical knowledge and seasoned with the author's own considerable experience. We read how the German front line officer retired disgruntled after the war, and only the "Base Swine" remained to reorganize the Reichswher. In France on the other hand the young front liners fought and vanquished the old regime, and from 1930 dates the rejuvenation of the French Army heralded by the pensioning off of whole groups of hidebound officers. It would be interesting to hear the author's views on the British Army in this respect. Did we decay, and if so has our rejuvenation already taken place, or is it still to come?

The author's opinions on the effectiveness of air attack on ground troops are encouraging to an infantry man, and are backed by his experiences in Spain where attacks by German and Italian aircraft on unprotected troops did surprisingly little damage, if elementary precautions in regard to concealment and cover were taken.

The tactics of each arm in modern warfare are discussed, and tanks and motorization are more fully dealt with than most books of this type. Every soldier, irrespective of his arm, will find much of interest in this section.

Part II ends with a section on the strategy and tactics of naval warfare, and here the author is very obviously all at sea. It is all too plainly the writing of a soldier, and a Continental soldier at that. The translator has made no attempt to gloss over the author's lack of knowledge of naval terms, and with tongue in cheek has perpetuated the howlers with which the original German must bristle. However, the apology tendered in the last paragraph redeems all, and like a front line veteran, the author retreats in good order with an effective parting shot at the Senior Service.

In the final part the diverse subjects of propaganda, dissemination of information, training and discipline are discussed, and it is here that we find the clue to the author's character and political creed, and for this alone it is worth reading. In regard to

propaganda we are given examples of methods employed to influence the army and the home front as opposed to the enemy. The majority of these are of the 'how not to do it' type. The author deprecates the tendency to 'catch them young' and considers that the older recruit assimilates military knowledge more quickly and more permanently than the youngster. The impression is left that political training is given more weight than the equivalent subject, which in the Indian Army is termed citizenship. Much sound common sense and experience is evinced when discipline is examined, particularly on the subject of the qualifications of a leader.

Though this book has been likened to the Curate's egg, no ill effects will result from its mastication, but the reader would be well advised to jettison considerable portions of it in the manner of a foot-baller dealing with the half time slice of lemon.

W. D. A. L.

OXFORD PAMPHLETS ON WORLD AFFAIRS

One of the main difficulties which the ordinary reader experiences in attempting to discover the main trends of contemporary events is that of selecting suitable reading matter on the subject. Literature on current international questions is prolific, but not all of it is good, and a great deal of it is biassed. Particularly is this true of the type which can be classified as condensed accounts and short critiques—and it is to these that the ordinary reader is apt to turn in order to make the best use of his inevitably limited time for reading. A notable exception to this general rule however is the series of "Oxford Pamphlets on World's Affairs." This now comprises some twenty-four numbers, and new ones appear at frequent intervals. The subjects dealt with range over the major political and economic questions which are now of topical interest. Thus, "Turkey, Greece and the Eastern Mediterranean" (G. F. Hudson) gives a useful background against which to judge present possibilities in the Balkans, while J. Walter Jones's "Nazi Conception of Law" helps towards an understanding of certain of Germany's more recent actions.

Contributors to the series are generally acknowledged authorities on their particular subjects—the names of Professor J. L. Brierley, Sir Arthur Salter, Geoffrey Crowther and Professor

Gathorne-Hardy may be mentioned. The measure of agreement between the various contributors is also remarkable when one recollects how often the opinions of experts conflict on the treatment of international problems. This is perhaps as strong a point of internal evidence as one could wish for when attempting to assess the authenticity of these pamphlets and the impartiality of the treatment accorded.

The economic aspect of the war claims three of the most recent numbers in the series. In "Blockade and the Civilian Population" Sir William Beveridge examines the effect of the Anglo-French blockade on the people of Germany from the legal, humanitarian and economic aspects. He comes to the conclusion that the hunger of the German people depends finally on the decision of their own Government, because there is nothing that we can do by way of blockade that is likely to make it impossible for the German population to be fed, provided their Government devotes to this purpose enough of Germany's total resources of man-power, materials and money. One may or may not accept this somewhat naive conclusion—prompted no doubt by a desire to refute the alleged inhumanity of blockade as a weapon—but this does not detract from the value of the article as a succinct essay on the power of economic warfare to-day.

Two different aspects of economic warfare are dealt with by Mr. Thompson in "Can Germany stand the Strain?" and Mr. Geoffrey Crowther (Editor of the *Economist*) in "The Sinews of War." Mr. Thompson's article loses nothing from critical comparison with the views expressed by Sir William Beveridge, and it is noteworthy that both these experts consider that the problem of the supply of animal and vegetable fats is the one factor which is likely to result in hardship to the German people. Mr. Thompson's arguments, however, deal more with the possibility of Germany obtaining essential supplies of material from "accessible neutrals" and the assistance Russia may be able to give her. In his opinion—"It is, in fact, inescapable that neither by ordinary commercial methods nor by coercion can Germany hope to evade the slow but sure pressure of naval blockade. In the corner of the world which remains open to Germany there simply do not exist some of the materials essential to the conduct of war and indeed to the maintenance of civil life." It is an opinion which does not take into consideration the effect of future German occupation of some of her neutral neighbours or penetration into the Middle East—possible developments outside the scope of the article. It is perhaps the more interesting for this

reason; for, if it is correct, the future can only offer two alternatives to the Nazi Government.

"The Sinews of War" is more "statistical" than most of these pamphlets. It is a model of clarity, and it would be difficult indeed to refute the five points which Mr. Crowther concludes are the vital conditions for victory. He is one of the many who believe that time is our ally—but he is cautious enough to add a proviso so obvious that it is too often forgotten: "Time is on our side—if we use it."

"Who Hitler Is" (R. C. K. Ensor) is a good short biography of the man who at twenty-one was "a slender, sickly, æsthetic youth" and in 1939 "decided for war, and signed the death-warrants for, perhaps, millions of lives." It is the only pamphlet in the series so far which deals with a personality rather than with the more general aspects of world affairs. Similar short studies of Stalin and Mussolini would be welcome when Russian, Balkan and Mediterranean affairs form the subjects of future pamphlets, as one may hope they will.

Although mention has been confined chiefly to the later pamphlets dealing with matters immediately connected with the war, it should not be overlooked that many of the earlier numbers in the series discuss subjects of equal importance and interest, though they may for the time being have become overshadowed by recent events. A complete list of titles to date is given on the back of each pamphlet and this forms a convenient guide to the scope of the series as a whole. These pamphlets can be obtained from the India branches of the Oxford University Press in Calcutta, Bombay and Madras, and presumably from most of the larger provincial booksellers and stationers. The price is As. 3 each.

J. G. N.

BOOKS RECEIVED

The Fighting Soldier, by Major W. A. S. Dunlop, late Australian Staff Corps (Angus and Robertson).

Jenghiz Khan, by Squadron Leader C. C. Walker, Royal Canadian Air Force (Luzac and Co: 17s. 6d.)

MAGAZINES

Battle Training in Word and Picture (George Newnes, Ltd.) (Primarily intended for the private soldier and the junior leader, but strongly recommended to those more senior).

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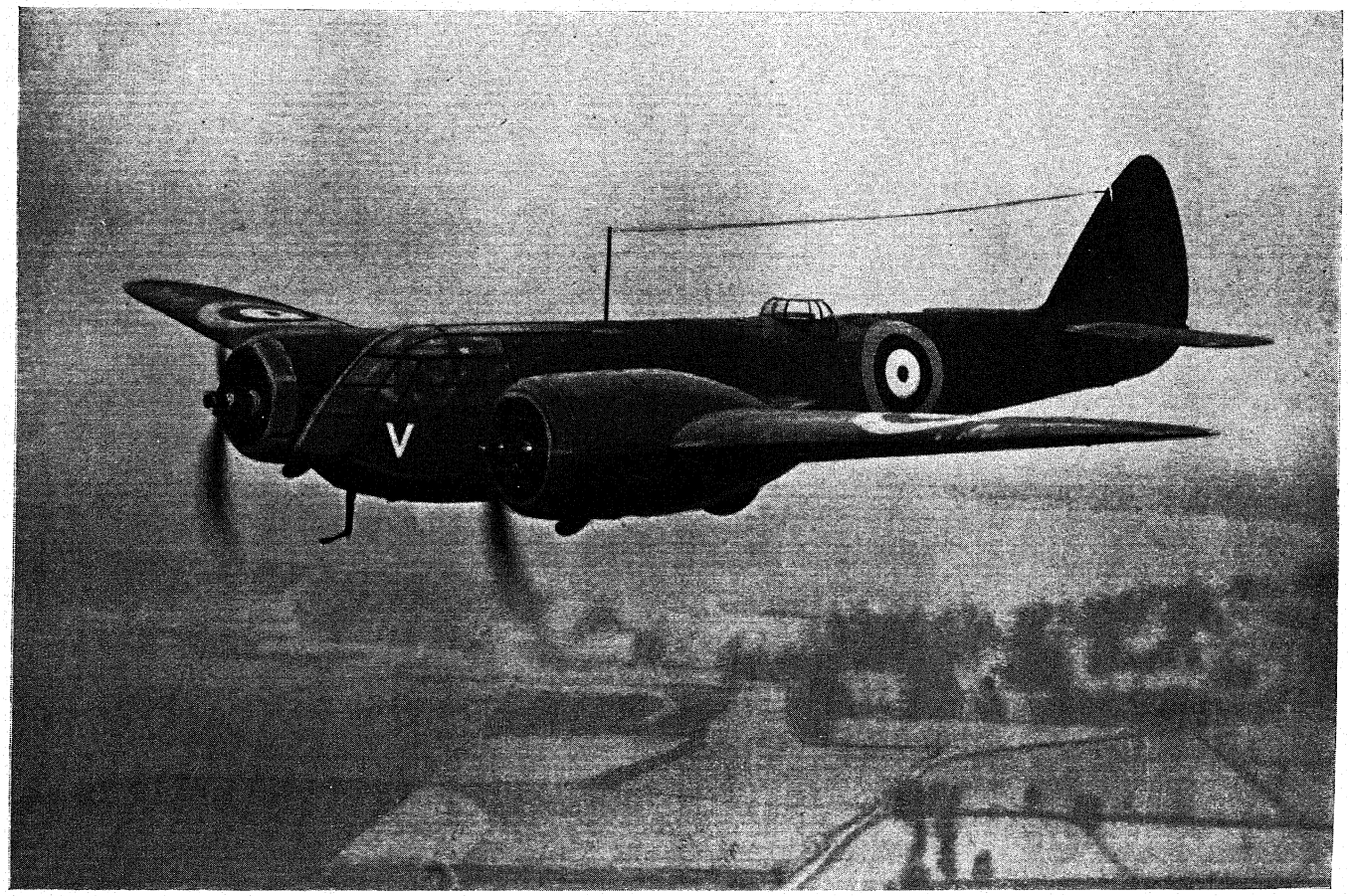

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(By Courtesy of "The Aeroplane.")