more rifles into action than his opponent is able to do. From this it follows that the enveloping action will be the usual form of battle; and that although the extent of front may not always be so great, in proportion to the numbers engaged, as on the battlefields of South Africa or even of Manchuria, the general tendency of modern invention will undoubtedly be to increase the area of the battlefield.

If then we are right in supposing that the front of an army in action will cover many miles of country, it necessarily follows that in approaching the field many roads will be used. Here the duties of the cavalry will begin; for the commander who can discover earliest the approaches by which the flank detach­ments of his opponent are moving, is obviously in the best position to form his plans for envelopment. Here we are verging upon the strategic use of cavalry; but under modern conditions the tactical use of that arm is almost merged in the strategical use. No doubt it has always been the object of the wise commander to attain his enemy’s flank; yet, since, owing to the increased range of small-bore rifles, turning movements like those which formed such a marked feature of Frederick the Great’s battles can no'longer be made after the infantry troops have come into contact, they must be prepared as soon as the necessary information has been obtained. More­over, nothing must be left to chance, for it can hardly be denied that if the battle of Gravelotte were to be fought again to-morrow, the failure to locate the right flank of the French army would have even more serious consequences than were actually the case (see Metz: *Battles of 1870).* Such mistakes can only be avoided by obtaining good information, and thus it will be seen that the chances of bringing off a successful converging attack are greatly in favour of the commander who is best served by his cavalry. But, as the opposing forces draw near, a gradual change comes over the duties of the mounted arm, for it must then protect the troops in rear from observation, so that the preparations for envelopment may be concealed. To this end the occupation of points of tactical vantage, such as hills, woods and villages, behind which the main army can deploy or the outflanking columns march in security, becomes its chief aim. In the next stage, *i.e.,* when one or other army is forced to stand on the defensive, reconnaissance of the position held will be the duty of the cavalry of the attack.

So far its functions are clear enough, but when the preparations for the infantry attack have been completed we have practically nothing to guide us. Unfortunately the two most recent wars, in South Africa and Manchuria, have taught us but little of the handling of cavalry in battle. In South Africa the peculiar characteristics of the Boers gave no scope for cavalry action; while in Manchuria the theatre of operations was practically a defile between the mountains and the Liao river, which afforded no room for manoeuvre. With regard to the handling of cavalry in conjunction with the other arms there is, therefore, more room for diversity of opinion than is the case with either infantry or artillery. Time alone will show the real capabilities of the cavalry of to-day, and the opening battles of the next great campaign in Europe will bring about many changes. Meanwhile such experience as we have to guide us seems to indicate that the development of fire has rendered cavalry, even when highly trained in the use of the rifle, less capable of acting indepen­dently against infantry than it was formerly. Throughout the war in Manchuria, we constantly find the Russian cavalry reconnaissance checked by Japanese infantry; and on the other hand the weak Japanese cavalry closely supported by infantry was fairly effective. The circumstances were of course peculiar, but the inference appears to be that unsupported mounted troops cannot be expected to achieve important results except when acting against similar bodies of the enemy; that is to say, under conditions which fall outside the province of com­bined tactics. Moreover, since well-posted infantry can easily hold in check greatly superior numbers of cavalry, it would certainly seem that wide tactical movements, intended to threaten the enemy’s line of retreat, are more likely than not to result in prodigal waste of strength. This being the case it would seem that the best use of cavalry on the battlefield will be on the flanks of, and in close touch with, the infantry, where each arm can render support to the other. On the defensive the tactical action of cavalry is not less important than on the offensive. Accompanied and strengthened by horse artillery it may occupy tactical points either on the flanks of the main position or thrown out well to the front. Aided by smokeless powder, magazine rifles and quick-firing guns, numbers may be concealed and the attacking enemy may be induced to deploy his troops and to reveal his movements prematurely. Should he do so, much of his advantage will be gone, for the defender will be greatly helped in his preparations for the counter-attack, the most effective weapon at his command.

But when at last the slower moving bodies of infantry and artillery come into contact, the battle enters upon a new phase. It has long been recognized that the first step towards the attainment of fire superiority over a vigilant enemy is a vigorous artillery bombardment. For many years this action of the artillery was regarded merely as a preliminary to the infantry attack; and it was not until the rude awakening of the early battles of the Boer war, that it was realized in England that unless the infantry co-operate, the artillery is not likely to produce any result. If the attacking infantry is kept at such a distance from the position that it cannot pass quickly to the assault, the enemy will retain his troops under cover during the cannonade, perhaps even leaving his trenches unoccupied, and present no target to the guns. Indeed, a most instructive instance of this very line of action is furnished by the battle of Ta-shih-chiao. There the right of the Russian line was held by the infantry of the 1st Siberian army corps, supported throughout the greater part of the day by only two batteries of artillery. So heavy was the fire of the Japanese artillery in this portion of the field that General Stakelberg, the commander of the Russian corps, sent word to his superior officer that he had not considered it advisable to occupy his trenches, and that should he be compelled to do so his troops must suffer very heavy loss. As things turned out the Japanese infantry did not deliver any attack against the Russian right, the defenders remained under cover, and the losses inflicted by the bombardment were almost negligible. Other instances might be quoted, but enough has been said to prove that to render the artillery bombardment effective the infantry must co-operate; for by this means only will the enemy be compelled to man his defences, to show himself above his parapets, and to expose himself to shrapnel fire.

Here arises one of those questions which are the outcome of modern science, but which have not been finally answered by modern war. As a result of improved ballistics, better methods of observation, and perfected methods of communication, it is now possible for field artillery to make use of indirect fire from behind cover. Against stationary objects, such as a battery in action, the results achieved by this method are as good as those which are obtained by firing directly over the sights. At the same time the control of indirect fire is slow, and it still remains to be proved whether it can be used satisfactorily against quickly moving targets. If it should be found that, in spite of scientific aids, the artillery of the defence can be made to leave its cover and to disclose its position by the advance of the infantry, the importance of the aid which one arm can render to the other needs no demonstration. After all, however, the silencing of the guns of the defence is but a means to an end, and the principal aim of the guns of the attack is to enable the infantry to get sufficiently close to the position to deliver an assault; for the infantry assault is the crowning act of battle. Similarly the gunners of the defence must never forget that their great object is to repel this same assault. The artillery duel, there­fore, is but a phase. Sooner or later one side will gain the upper hand. Then it must be decided whether the inferior artillery can best serve the interests of the infantry by continuing the duel, or by ceasing to fire until it can find some more vulner­able target.

Should the guns of the defence have proved inferior to those