MODERN CAVALRY

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MODERN CAVALRY

STUDIES ON ITS RÔLE IN THE WARFARE OF TO-DAY WITH NOTES ON TRAINING FOR WAR SERVICE

BY

MAJOR MALCOLM WHEELER-NICHOLSON

Cavalry, United States Army

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PREFACE

THE tumult and shouting of the world war has had a little time to die down. Throughout its course and for some time afterward it was impossible to clarify ideas and to deduce lessons. These require a certain amount of perspective for their better rendering.

This perspective has been a little furnished by the passage of time. Time is a cold analyst who makes tangible the real causes and effects and relegates the merely subsidiary to a nebulous background. Out of the haze and smoke of conflict we can begin to see dimly the simple primitive forces that were at war and to see the underlying causes that make for victory or defeat. In freeing the mind from the thralldom of the present, in deliberately comparing this war with all wars, the mind of the military student becomes amazed at the simplicity of the predominating factors in warfare.

This last war has complicated the issue by the use in battle of a larger variety of innovations in the way of auxiliaries and mechanical aids, than any war in history. The aeroplane and the tank and a host of like aids have a tendency to obsess the mind of the unthinking to the exclusion of the important factors in victory or defeat, to the real forces that battle for ascendency.

Battle is decided by men. Mechanical aids and auxiliaries end by neutralizing each other. They do not decide a war. It is the actual physical contact of men

or the fear of physical contact that decides battles. In the final analysis it is the preponderance of man power that wins.

To secure this preponderance of man power at the right place and time is the aim of all military leaders. It is the aim of all strategy and the reason for all the cumbersome mechanics of war. The Great Captains, from Hannibal to Napoleon, have been great because they, above all others, realized the fundamental simplicity of war. The failures and mediocrities in military history have failed because they grasped at the shadow, were obsessed with forms, formulas, geometrical figures and thereby missed the substance. "Getting there firstest with the mostest men" has always been and will always be the principle of warfare. All else is accessory.

The "getting there firstest" part of this principle is the part upon which the argument for cavalry is based. In using the word cavalry it is first necessary to disabuse the mind of the untechnical civilian of any ideas of waving plumes, whipping pennons and flashing cuirasses. The horse has become more of a means of transportation whereby to transport a soldier, armed, equipped and trained in all respects as the footman, to the firing line. Our cavalrymen use the same rifle, and are trained in the same musketry course as are the infantrymen of our army. They expend the same amount of ammunition at target practice as do the infantrymen. Why the battle value of our cavalry should be lessened by the fact that they approach the field of battle on horse rather than on foot has yet to be proved.

Since the World War there are those who would supplant cavalry with infantry mounted in trucks and lorries. This, it is claimed, would make cavalry superfluous by rendering infantry equally mobile. This was done in the

war on the Western front, argue they. This argument takes for granted that there will be, in any terrain we will be called upon to march over, similar roads to those existing in Northern France. If one will take an atlas and estimate just how much of the earth's surface is covered by roads in any way similar to those of Northern France this argument is at once proved fallacious. To particularize, in Europe one finds good roads in France, Germany, and the British Isles. And by good roads is meant roads that will stand up in rain and shine against the fearful racketing and tearing of heavy motor traffic. From the standard set by these three countries the roads of the remainder of Europe grade down to the cattle tracks on the immense steppes of Russia. The great highlands of Asia, the enormous extent of Africa, China, Siberia and Australia must be taken into consideration. In the two Americas we have a few good roads on our Atlantic seaboard, a narrow strip, and a few good ones on the southern end of our Pacific seaboard. Against these must be put the enormous territories of South and Central America, Mexico, the remainder of the United States and Canada. To base our transportation needs solely upon conditions existent in the comparatively tiny proportion of the earth's surface containing good roads and to disregard the hundreds of thousands of square miles not so blessed is putting too many eggs in one basket. The weakness of this is further exemplified when one takes into consideration the remote chances of another war between two white civilized races on civilized terrain, as compared to a war between a white civilized race and a colored race of lesser civilization fighting on a primitive terrain. And the greater portion of the earth's surface is primitive terrain inhabited by semi-civilized, barbaric or savage peoples.

In addition to the great extent of the earth's surface where it is impossible to use gasoline transportation, there is another phase of the problem that few people know or reflect on—*the fact that the gasoline supply of the world has a known limit and that limit much closer than people realize.*

Before relegating cavalry and the horse to the limbo of forgotten things, it is wise to reflect a little upon the Palestine campaign—a campaign undertaken and pushed through while the fighting on the Western front was in progress—with forces having access to the innovations introduced in this war. Because of the terrain, these forces fought, with few modifications, as Richard and Saladin fought in days gone by. The man, aided by the horse (a proportion of something like three divisions of cavalry to four of infantry) struggled as he has always struggled and always will struggle when a little removed from the good roads of civilized countries.

Civilization has been overrun by horsemen from time immemorial. At recurrent periods throughout the course of history, hordes of horsemen have swept over Europe from the highlands of Asia. Our own America was discovered because of the closing of the trade routes to the East by the Seljukian Turks, marauding horsemen who had, themselves, been pushed from their fastnesses by still other roving horsemen in the interior of Asia.

As long as the enormous stretches of almost trackless land surface on the globe are so much greater in extent than the small area of improved country, as long as these great domains are inhabited by people inferior in civilization, just so long will there be need of the mounted man.

This necessity for cavalry was impressed upon the writer after having served on the plains of the Texas-Mexican border, after having served with Cossacks and

Japanese cavalries in Siberia and after having traveled over most of Europe, which traveling was followed by an exhaustive study of the World War. The necessity of attempting to correct some of the current fallacies in regard to cavalry was impressed upon him.

This work is not intended as an exhaustive or complete treatise upon cavalry. It is an attempt to put between the covers of one book the best thought on the subject as represented in the conversation and writings of English, French, Belgian, Japanese, Russian and German cavalry officers. The writer has had the privilege of studying at first hand the cavalry services of all of the above named cavalries except the German and made up for this latter lack by studying the Swedish which is closely modeled on the German. Good ideas have been freely pre-empted wherever found. The notes on training have been for the most part hammered out from personal experience extending over nearly ten years of service as a cavalry officer.

It is hoped that the young cavalry officer will be enabled to find herein enough matter of interest to lead him to reflection on the tactical possibilities and responsibilities of his profession.

The work is offered with no apologies. It represents a lot of hard work honestly undertaken in an effort to contribute a little to thought on the subject of National defense. It tries, as best it can, to fill the gap caused by the fact that there is no modern work based on cavalry service in the World War.

M. W. N.

ACKNOWLEDGMENT

The following works have been valuable in furnishing materials:

Cavalry in War and Peace.....von Bernhardi
Cavalry in Future Wars.....von Bernhardi
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The Nation in Arms..... von der Goltz
The Conduct of War.....von der Goltz
On War.....von Clausewitz
Tactics, Cavalry and Artillery.....Balck
Entwicklung der Taktik im Weltkrieg (Berlin, 1920) .....Balck
The March on Paris.....von Kluck
Die Rieter Patrouille im Weltkrieg....Rittmeister Kronberger
Die Militarischen Lehren des Grossen Krieges .....M. Schwarte
Heerführung im Weltkrieg .....von Freytag-Loringhoven
Our Cavalry.....Rimington
A History of Cavalry.....Denison
1914 .....Field Marshal French
The Palestine Campaign.....British Official Account
Aids to Scouting.....Baden-Powell
The Art of Reconnaissance..... Henderson
Some Achievements of Cavalry.....Field Marshal Sir Evelyn Wood
British Campaigns in France and Flanders .....Conan Doyle
The Tank Corps..... Williams-Ellis
La Cavallerie Française de la premier battaile de la Marne.....Hethay
The Principles of War.....Marshal Foch
Cavaliers de France (1914 Etapes et combats) .....Capitaine Langevin

The Crowd .....Le Bon
The Transformations of War.....Commandant Colin
American Campaigns.....Steele
The Mounted Rifleman.....Brig. Gen. Parker

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CHAPTER I

THE VALUE OF CAVALRY

Far from having had its luster dimmed by the world war, the cavalry service has gained new power and value by the lessons learned therein. Cavalry has always had certain advantages and virtues possessed by no other branch. It has still those virtues and advantages but has added immeasurably to the original stock. It has lost certain of its disadvantages.

The great advantages possessed by cavalry have always been its superior mobility and offensive power. The great lack has always been stability and defensive power. It still has its original mobility. It has, in addition, a greatly enhanced offensive power. It has now a stability and defensive power only slightly less than that of the infantry. It went into the world war an auxiliary branch —it has come out with the position that rightfully belongs to it—that of a co-equal combatant branch.

The future of the cavalry lies in its ability as a combatant or fighting branch. It is in developing to their fullest capacity these capabilities that the energy of the

cavalry must find its fullest expression. It can and must be made the powerful arm in our army that it is fully capable of being. It has always been the only arm in the hands of a general whereby to dominate movement. It is the arm of decision. There can not be a decisive victory without its aid. This has always been true. This truth has gained greater strength and importance owing to the increased fighting value of cavalry and its increased range of capabilities.

Cavalry is an arm highly sensitive to leadership. It is not only necessary to have good cavalry but the higher commanders must understand the proper handling of it. Many faults laid at the door of cavalry can be laid directly at the door of the higher authority unskilled in its use. This was the chief fault of the German leaders in 1870 and of the Japanese and Russian leaders in 1904.

The officer who is ambitious to wear the general's stars and to lead in battles of the future must thoroughly understand the powers and capabilities of cavalry. Any officer who hopes to rise to successful command must understand how to direct or cooperate with cavalry. The proof of this needs no more than a critical study of the cavalry operations in the world war, not only a study of the comparatively limited sector of the Western front, as valuable as that is, but a study of all fronts.

The chief lesson to be learned from this study is, that upon the results gained by the cavalry in the first weeks of a war will depend, to an enormous extent, the success or failure of the first decisive encounter of all arms.

The second lesson to be learned is the one stated above —the increase in the value of cavalry as the result of its action in the world war. To realize this it is only necessary to study the Allied cavalry performances;

above all, the British cavalry. Such a study will convince one that never has cavalry in the past performed duties as valuable or as varied as it has in the war just finished.

It is further necessary to disabuse the mind of all ideas as to the importance of position warfare in the wars of the future. It is necessary to remember, especially for American officers, that after the first few weeks in 1914 the war on the Western front was nothing but one stupendous battle. A battle has ordinarily three phases, the maneuvering or contact period, the encounter period, and the withdrawal period. Cavalry, as cavalry, is of paramount importance in the first period, when the opposing armies are finding each other, and in the third period when one has been defeated and retreats and the other has been victorious and pursues. But in the second period, the period of infantry and artillery action, cavalry finds its greatest sphere of influence upon the flanks. *In this great battle of the Western front the second period lasted over four years and there were no flanks.*

On the Western front the cavalry performed nobly in the first period, acted as infantry and a mobile reserve in the second period and was denied participation in the third owing to the moral collapse of the Germans while they were still practically intact physically. To say that the warfare of the future will be similar to the warfare on the Western front is to say that all wars of the future will be fought by millions of men facing each other with the sea on one flank and a neutral country on the other.

Half-baked enthusiasm for or half-baked condemnation of cavalry are both valueless as being based upon ignorance. It is necessary to give heed, however, to the opinions of the leaders in this stupendous struggle. Such men as Field Marshal French, Field Marshal Haig,

Field Marshal Allenby, General Pershing, General von Kluck and General Ludendorff to mention a few, whose viewpoint is necessarily based upon a knowledge of the whole rather than restricted to any special part, have expressed opinions upon cavalry that are well worth quoting.

Among a great many other commendatory remarks upon the work of the British cavalry Field Marshal French [1] has this to say referring especially to the share of his cavalry in battle: "The greatest threat of disaster with which we were faced in 1914 was staved off by the devoted bravery and endurance displayed by the cavalry corps under a commander, General Allenby, who handled them throughout with consummate skill . . . it is no disparagement, however, to the other troops engaged if I lay stress upon the fact that it was the cavalry alone who, for more than a fortnight previously, had been disputing foot by foot every yard of the ground to the river Lys. They had fought day and night with the utmost tenacity and the battles of October 31 and November 1 were but the climax to a long and bitter spell of heroic effort. . . . Taking into account the losses they suffered they can hardly have opposed 2,000 rifles to the onslaught of what has been computed at more than two German army corps."

Field Marshal Haig, in his careful report of the war to his government, had the following to say about the cavalry service: "In the light of the full experience of the war the decision to preserve the cavalry corps has been completely justified. It has been proved that cavalry, whether used for shock effect under suitable conditions, or as mobile infantry, have still an indispensable part to

[1] "1914," p. 266.

play in modern war. Moreover, it can not safely be assumed that in future wars the flanks of the opposing forces will rest on neutral states or impassable obstacles. Whenever such a condition does not obtain, opportunities for the use of cavalry must arise frequently."

"Throughout the great retirement in 1914 our cavalry covered the retirement and protected the flanks of our columns against the onrush of the enemy; and on frequent occasions prevented our infantry from being overrun by the enemy cavalry. Later in the same year at Ypres their mobility multiplied their value as a reserve, enabling them rapidly to reinforce threatened portions of our line."

General Pershing in his article in our *Cavalry Journal*[1] stated that "The splendid work of the cavalry in the first few weeks of the war more than justified its existence and the expense of its upkeep in the years of peace preceding the war. The American theory for the employment of cavalry is correct and the Allied cavalry would have been of even greater use in the early months of the war if it had been trained as American cavalry is trained."

On the other side von Kluck, the commander of the First German Army that made the rush through Belgium and France to be stopped at the First Battle of the Marne, has this to say as to one occasion when he lacked cavalry: "On the occasion of the pursuit of the British army after Mons and their successful and skilful retreat on the 24th and 25th of August 1914 . . . the chief factor[2] that enabled the British Army to escape was that the German First Army (von Kluck's) lacked the effective means of

[1] Journal U. S. Cavalry Association, April, 1920.
[2] "The March on Paris, 1914," page 56.

making it stand and fight, namely, the three divisions which composed Marwitz's Cavalry Corps."

Ludendorf [1] is quoted in the *Cavalry Journal* as saying: "The cavalry was of the greatest importance and service to me in all campaigns of movement. In the March, 1918, offensive in France, I felt seriously handicapped by the lack of cavalry."

It will be noted that most of these testimonies as to the value of cavalry refer to it in the movement phase of the war. As long as armies are forced to maneuver, as long as there are great stretches of broad continent in the world, in America, in Africa, in Europe and in Asia just so long will there be need of highly mobile troops. So far the cavalry is the only successful mobile branch fit and able to discharge all duties that a war of movement would make necessary.

Cavalry has improved to an enormous degree. It can defend itself from surprise more fully, can deceive, threaten and hold in check and is much more capable of vigorous offensive action than in former days. It is keeping up with the demands of modern war. The very innovations that were loudly proclaimed as capable of supplanting cavalry are developing now into aids that have added immeasurably to the value of cavalry. It is high time we stopped speculating on the numerous and varied substitutes that were to supplant cavalry, such as aeroplanes, tanks, etc., and study as to how we can best utilize the power of these new weapons to aid cavalry.

The history of the art of war has been the history of battle. Battle has always been decided by men, men armed with spear and shield or men armed with rifle and bayonet. The scythe-bearing chariot, the elephant

[1] Journal U. S. Cavalry Association, July, 1920.

tower, the tank and the aeroplane were and are auxiliaries that aided or aid the elemental man to fight his enemies, to come to actual physical contact with them. This actual physical contact, or the fear of it, is what always has and what always will, decide battles.

Battles have been won by men, armed with this weapon and that, aided by this auxiliary and that. In some periods the mounted man predominated in others the footman. The history of the development of tactics has been the history of the alternate rise and fall in importance of horsemen and footmen as battle troops. Cavalry occupied a high place as offensive troops in battle down to the period of the invention of the breech-loading quick-firing rifle. The American Civil War blazed the way towards a new development of cavalry tactics—the development of the highly mobile cavalryman armed also with the quick-firing breech-loading rifle, capable of fighting mounted against cavalry or dismounted against infantry. This was simply a revival of the dragoon principle which is as old as the history of cavalry. In spite of the lessons taught by the American Civil War, European cavalries stood fast by their out-of-date tactics, the idea of the *arme blanche* to the exclusion of aught else.

The English carried out these ideas even as late as the Boer War. There they encountered a highly mobile type of rifleman who ran rings around their old-fashioned cavalry tactics. They learned in the Boer War what we learned in the Civil War. They profited well by their teaching, amplified their armament and carried things to a still further point in their insistence upon cooperation of horse artillery with cavalry at all times, a high degree of rifle and machine gun fire and a general augmentation of the offensive fire power of cavalry. They have not

forgotten the use of the horse as a weapon but have attached the proper weight to that use.

Our theory as to the use of cavalry is correct as has often been stated. Our practice in training does not fully carry out the tenets of our theory. It is a serious question whether the British have not outstripped us in their practice while we have been content with the theory. It must be remembered that they have had two wars in which their cavalry has fought and learned since our Civil War, which was the last that saw American cavalry used in any numbers as cavalry.

It is inspiring to read the words of Field Marshal Allenby in the January, 1921, number of the American *Cavalry Journal* as representing the opinion of a most successful British leader in the World War: "I have been a cavalry officer ever since I joined the army in 1882 and I have never felt more confidence in the future of the arm than I do today. . . . Recent inventions and appliances affecting the conditions of war, so far from lessening the power and scope of cavalry have added thereto."

The chief value of cavalry is its value as a highly mobile battle arm. It is a fighting branch. That it can, in addition, perform valuable screening and reconnaissance duties, can threaten flanks and rear, can act as a highly mobile reserve, can on occasion use its horses as weapons, can pursue and can cover a retreat does not detract from the fundamental reason for its being—that its men can fight shoulder to shoulder with the infantryman. It can do it because it has done it and accomplished glorious results in modern war.

It is only in the minds of that type who read as they run that cavalry has suffered in estimation. This type of mind has concentrated itself upon the special opera-

tions covering a comparatively limited period upon the Western front. It is the only front with which the American public is at all acquainted as a whole. The splendid operations of Allenby's cavalry in Palestine are now known to the army as well as the operations in Mesopotamia and Syria. The cavalry operations of the early days of 1914 on the Western front are available for study. Little light has as yet been thrown on the operations of the German and Russian cavalries on the Eastern front though fragmentary references to these are contained in the *Militär Wochenblatt* that point to the existence of great decisions gained by the arm in that sector. The operations in Rumania are not available for study at the time of writing. There is however a wealth of material available for study without these.

Had any one of these fronts, in which open warfare was the rule, been in the limelight by being the sole theatre of operations, with the world's attention focussed upon it to the exclusion of aught else, it is believed that the value of open warfare and the correspondingly greater value of that essential open fighting arm, cavalry, would not have suffered to the extent that it has in hasty civilian estimation.

The civilian mind forms its notion of military happenings from press despatches. The military mind must not content itself with the same information. This condition has worked a species of injustice on the cavalry service. One does not stop to think that it is an unusually active newspaper correspondent who can accompany cavalry on campaign, and to reflect that the rare press correspondent who did must be a species of military genius to evolve news items out of his restricted view of any cavalry operations with their enormous extension and extreme

rapidity. His viewpoint would necessarily be restricted to the minor share played by the squadron or other small unit that he accompanied. Small blame to him if he turned to the spectacular innovations that were more nearly under his eye and whose "news value" from his viewpoint and from the viewpoint of the people he served—the reading public—was immeasurably greater. The work of cavalry on campaign extends over a greater area and is exceedingly difficult for the layman, with his hazy notions of tactics and strategy, to understand. For these reasons the work of the Allied and German cavalries during the first phase of the war, in the early days of 1914, has never been assessed at its full value by the public as a whole.

There is no excuse for the military mind following this model. Sufficient study and reflection on the part of the most skeptical will convince them of the value of cavalry. It is a waste of time to argue upon a question so easily proved. This time should be devoted to a study of the tactics and training of cavalry.

A study of armament, training and tactics for cavalry would lead to a study of the probable theatres of war for that branch. Any place on the earth's surface is a possible theatre of operations. What would have been the reply of an American cavalry officer cheerlessly doing "fours right" in the sun and sand of the Mexican border in the year 1912 if he had been told that in seven short years he would be struggling against the German in the fields of France? He would most likely be as unconvinced today if told that he might in a few short years be struggling on the rich and productive spaces in Siberia against a powerful military autocracy to ease its stranglehold on a virgin continent. There is scarcely any place

on the earth's surface that is improbable as a theatre of future operations and still fewer that are impossible. Modern means of transportation make of the sea a highway rather than a barrier. As to causes, no man knows what the morrow will bring forth; this however is certain—every point of contact with a foreign nation is a possible point of irritation. Our points of contact have increased a thousand fold in the last few years and are still increasing by leaps and bounds. The cavalryman has no means of foretelling upon what broad continent his training and skill may be called in as a bulwark to his country; it behooves him prepare for any eventuality. He must not be narrow. He must above all refrain from adopting as his model the type of warfare on the Western Front.

Sir John French [1] says: "It is always a danger when some particular campaign is picked out at the fancy of some pedagogue, and its lessons recommended as a panacea. It is by study and meditation of the whole of the long history of war and not by concentration upon single and special phases of it, that we obtain safe guidance to the principles and practice of an art which is as old as the world itself."

For all these reasons it is to be hoped that the type of mind that bases all its conclusions upon the American phase of the warfare on the Western Front will not be the deciding voice in our legislative chambers and military councils, so that cavalry shall not undergo the danger of being assessed at less than its true value and that its strength shall not be cut down to a point where it can seriously affect the strength of the army as a whole.

[1] Preface to translation, "Cavalry in War and Peace," von Bernhardi.

The public as a whole should be educated to the value of cavalry. Propaganda is only the official word for advertising and there should be few Americans unaware of the value of advertising. The necessity for it is this—that the army originates and is supported by the people and it is due them that they be informed of it in spite of themselves. Without the popular support thus stimulated the cavalry will not be the strength to the army and the country in the hour of need that it should be.

Every cavalry officer should consider himself duty bound to educate all with whom he comes in contact. The Cavalry Association and the *Cavalry Journal* should be supported enthusiastically. Close touch should be maintained with National Guard and Reserve Cavalry Officers. Effort should not only be made to give them all the assistance and encouragement possible and to make them feel that they are brothers in arms but their assistance must be secured in furthering the advance of the mounted service as a whole, which as civilians, they can do in many ways not open to the Regular officer, the encouragement of horse breeding and horse interests generally, being one.

Effort should be made to secure as reserve officers that class of young men whose interests are allied with cavalry interests—horse breeders, polo players, gentlemen jockeys, and horse enthusiasts generally. Their cooperation would succeed in keeping the cavalry more in touch with the public, and would have its effect in raising the value of cavalry in civilian estimation. The education of the public to the value of cavalry will lead to an increased appreciation of it and this will be valuable in that it will react quickly and favorably upon the morale of the service.

The morale of our cavalry service suffered somewhat,

both from the fact that so many of the younger cavalry officers were not enabled to share in the fighting on the Western front, and from the temporary eclipse of the value of cavalry owing to the non-use of our mounted men in France. It is necessary to raise this morale. One of the best means is the educating of the cavalry officer to the value of his branch. He must not only be informed of what it has done in modern war of the past but what it is capable of doing in war of the future.

He must remember that cavalry, while less numerically, is more important strategically, owing to the extension of modern battle fronts, and to the increased sensitiveness of the enemy's lines of communications caused by the demands of modern war. The modern army is comparatively much more dependent upon its line of communications than formerly. This renders movements against such lines of greater value than in the days when an army could live off the country. Any interruption of the enemy lines of communication has a much more telling effect than formerly.

He must remember that while cavalry has to a certain extent been supplanted as the organ of strategical reconnaissance by the air service, that such supplanting operates to aid the cavalry and to allow it to develop to the fullest its capabilities in tactical reconnaissance, which the aeroplane cannot replace. That side which through any cause is denied the assistance of its air force—whose air force meets with defeat—will be deprived of all means of reconnaissance unless it can rely upon cavalry.

It must be remembered that cavalry is the arm of decision. It is the strategic and tactical weapon capable of swift and extended movement. Cherfils [1] says that "three-quarters of the strategy of war lies in the method

[1] Quoted in "Our Cavalry," Rimington, page 98.

of the employment of cavalry." This is true because cavalry, if properly handled, ensures to the higher command freedom of action and correspondingly denies that privilege to the enemy.

As long as the individual soldier with his weapon remains the ultimate factor in warfare so long will cavalry retain its importance as a combatant arm; the world as yet has too many broad spaces wherein armies of the future can be moved. That army that retains the largest force of highly mobile battle troops will hold the winning cards in the future as in the past.

The value of cavalry will be nothing unless we have leaders trained in its use—not only leaders in the arm itself but leaders of all branches. A combination of fine horses, excellent riders and excellent shots will not make cavalry. All these are worthless unless they are led, led by leaders who understand the tactical and strategical value of that most sensitive and responsive of all arms to leadership. Leaders are needed who can cooperate intelligently with higher command, who can cooperate with infantry and artillery and who can in addition fulfill all the manifold duties demanded of a cavalry officer.

To have cavalry of the highest value it must be led and well led—to be able to lead it properly should be the ambition of every cavalry officer. To achieve leadership requires a careful balance of study and action, requires moreover, a sticking to the main issue, a constant objective in view, a daily analysis of one's activities, a daily asking of the question "Am I following the road that is leading to improved readiness for war or am I plucking daisies by the road side?"

CHAPTER II

TROOP TRAINING—SOME BASIC FACTORS

In the cavalry service we must realize that the American cavalry has not had the advantages of service as cavalry in campaign in the World War. We have not had the opportunity of learning lessons, of correcting errors, of formulating doctrines, that has been granted the other branches. In other words, we are behind the other branches. They have had their trial by fire, we have not.

The only alternative is the alternative of learning by the experience of others. How can we best do that? What do we want to learn?

At the present time we are formulating a cavalry doctrine. A cavalry doctrine is necessary before we will ever make a united and efficient working force of the cavalry. This will first require the development of a clear and uniform combat policy for the cavalry. This policy should be enunciated definitely and unmistakably and should be the basis for peace time training and war time service.

The next step is the concentration of the best brains in the cavalry on the training problem, to determine the limit and scope of the training necessary to realize the tactical ideals announced in the doctrine. This then would be the basis for determining the standards of training of all units of the cavalry from the private on up through

the squad and platoon to the division. Lastly, there should be a strict and uniform test for every unit.

Scharnhorst[1] is quoted as saying that in war it did not matter so much what was done as that it should be done with vigor and singularity of purpose. Vigor and singularity of purpose are the necessary forces to put into effect if we are to have a cavalry fit to hold its own.

The adoption and strict carrying out of any system, based on good sense, would obviate the very common practice of devoting time and energy to subjects that have no bearing upon battle efficiency. It would stop the branching off of the main road that leads to preparation for war and the following of innumerable small by-paths that lead nowhere.

The ideal for which the cavalry should strive should be a thorough training for fighting. Every activity should be analyzed from that viewpoint. Individual hobbies should be banned with bell and book. All hobbies contain in them some element of good to the service. It is when one hobby is followed to the exclusion of all other training that the harm results.

It used to be possible very often to find regiments that were simply aggregations of lettered troops. In this type of regiment it was not seen that the regiment was failing to justify its existence by being a tactical organization, but was simply content with being called a regiment, in other words, this term had degenerated into nothing more nor less than a drill designation and an administrative convenience. In the regiment of this type, one troop was composed of excellent horsemen and well-trained horses,

[1] At the council of war held on Oct. 5, 1806, in the Prussian Headquarters at Erfurt. Quoted in "The Nation in Arms," von der Goltz, page 63.

another was proficient with the sabre, another was a shooting troop and a lot were simply mediocre at everything.

The commander of that regiment labored under the delusion that he was commanding a tactical unit; he was not. He was commanding twelve troops, each troop more or less of a specialist at some one phase of work, all of them varying in efficiency in any number of classes of work that they were liable to be called upon to perform in the field. To achieve any results in campaign with that type of command, it was necessary that the regimental commander have a highly developed knowledge of all the peculiarities and specialties of his subordinate commanders. The problem was further complicated when it reached the brigade because the brigade commander had to know all the personal quirks of all the subordinate commanders with the addition of the personalities of his regimental commanders. In other words, to be a successful higher commander of cavalry under such conditions would require an intimate and detailed knowledge of all the idiosyncrasies of all the subordinate commanders who had anything to do with training. Such a lack of system is dangerous. Some day in the field men will be sent on missions that they are not trained for, men will be put into the firing line and waste ammunition, they will be sent on patrols and hurt their unit by being captured instead of aiding it by bringing back information. Men in every unit will vary in the nature and degree of their training in all phases of cavalry work.

It is absolutely necessary that every regiment, every squadron and every troop be trained in the same subjects and be equally well trained. This can only be achieved by standardization of training.

When training is standardized there will be the inevitable cry from the unthinking regarding "initiative." Initiative is a term that has been abused a great deal. It is wise to consider initiative and its relation to training. The development of the highest degree of initiative compatible with the military machine should be the ideal—especially in the cavalry. But the difference between the initiative that leaves the choice of results in the hands of many and diverse personalities and the initiative that finds expression in choice of means to fulfil certain prescribed requirements should be clearly understood. In the one case there are some ten or twelve requirements for a trained force of cavalry; the initiative finds expression in choosing the number and type, in selecting which of these subjects shall be worked upon. In the other case the initiative finds expression in choice of means to comply with certain standards prescribed for the whole service. This is the proper outlet for initiative.

To develop the highest degree of initiative possible in all subordinates is a laudable objective for the cavalry service. To do it implies that every subordinate leader should actually lead. He must have command of his unit, and this must hold true from the squad on up to the division. The corporal and the sergeant must be given the highest degree of responsibility possible. They, like all others, should be required to render an accounting of their stewardship at stated intervals by means of prescribed tests. The lieutenant, who in many troops of the old army, was detailed hither and yon on a variety of odd jobs, must be developed by responsibility. And one of the best methods of developing responsibility in a combat officer is to allow him to command. Give the lieutenant a platoon and make him responsible for it; he has to lead

it in war, he should learn in peace. In practice such a system is found to develop the enthusiasm and energy of the lieutenant to a remarkable degree.

The troop commander, an individual upon whom the responsibility should rest, should be judged by his results. It is believed that the comparative youth of present field officers has a tendency to work a hardship on many troop commanders who find that they have too many means prescribed when, as a matter of fact, the choice of means should be left to their judgement. The squadron commander should look upon his duties more in an advisory light and should consider himself, as far as training goes, more as a guide and a counsellor. When the time comes for testing the state of training of his unit then he should be very exacting. Up to that time he should consider that his main duty is the training of officers. If he wants highly efficient, dependable and responsible troop officers under him then he should work to develop these qualities in his subordinates, remembering that the ideal is to give a man a job and then let him develop it (and incidentally himself) to the highest degree. If he is incapable of development and is unworthy of being trusted take measures to get rid of him.

The troop commander must carry out the same principle with his subordinates. His lieutenants and non-commissioned officers are entitled to the same amount of responsibility and trust that he desires.

The non-commissioned officer is an important person in any branch. Owing to the dispersed work of cavalry he is exceptionally important in this branch. His capabilities as a trainer are very often not sufficiently developed. He should in the first place be selected more carefully than he is in many organizations. Simply being

an old soldier is not sufficient. There are old soldiers and old soldiers. The non-commissioned officer should be a professional soldier of a high type of efficiency and capability. As to selection, let the troop commander select him as heretofore, but let the higher authority prescribe a test before he is appointed. This test should be a thorough examination of him as a horseman, as a shot, as a leader, and as a scout. Let this test be held frequently in the organization so as to make it an incentive for the private to better his condition. Some means of advancement should be made open to the private in addition to the whim of his troop commander. The non-commissioned officer once made should have as much honor, responsibility and initiative allowed him as is possible. It would be the better part to attempt the formation of a class of professional soldiers amongst the non-commissioned officers, to make this more of a career for a young man than it now is. There should be a greater difference in the pay of the non-commissioned officer and the private than there is now. The non-commissioned officer should not be treated as simply a private with some marks on his arm. His initiative and responsibility should be developed by throwing upon his shoulders the direct responsibility for the training of the individual. The officer should visualize his duties more as a trainer of groups.

The task of the officer does not end with developing his own energy to the highest point. He will fail signally as a leader if he does not develop the capabilities of his subordinates. This after all is the test of leadership. A study of means to encompass these ends will repay an officer out of all proportion to the labor involved. Every part of the machine should function under its own power. It should function automatically, the energy coming from

within, the sum of the energies of the subordinate leaders. The difference is like the difference between one man who laboriously pushes an automobile with a dead engine and another who rides in a machine moving along under the power of its own engine.

To achieve such results it is necessary to crowd subordinates with responsibility, to avoid worrying them, to demand results, to rate them competitively, to praise and reward the successful and energetic ones and rid oneself of the failures. Every subordinate should be tested and his capabilities measured.

The troop commander's success or failure depends upon the performance of his organization. This depends in great measure upon the amount of energy developed from his officers and non-commissioned officers. How many troop commanders really have anything but a rather hazy idea of the comparative virtues and failings of their subordinate leaders? The only successful means of arriving at this ability to judge is to test them in command of a unit appropriate to their grade.

Owing to the nature of cavalry requirements, the cavalry soldier is required to absorb a knowledge of many things. The horse, the rifle, the automatic rifle, the automatic pistol, the sabre, scouting, care of self and equipment are a few of the most important. To train properly a man in all these subjects in addition to the other many demands upon his time, presupposes a very exact and scientific system of training the individual if results are to be gained. There cannot be any duplication, any lost motion or any slighting of any of the subjects. To neglect any link in this chain of instruction will weaken the whole.

It is a serious question whether we even approximate a

thorough covering of all the subjects of training with the individual soldier. All these things have to be crowded in the short space of time left in a soldier's enlistment from guard duty, from the hospital, from schools, from the guard house and from fatigue duties, all of which take time from the important duty of training the individual for war. To achieve this means a great deal of thinking must be applied to the problem.

There is not enough thought expended upon the individual as an individual. The average troop officer is prone to look upon him in the aggregate. He is prone to concentrate his energy upon the proportion of men he turns out each day for drill but he does not think of the men who are not at drill. He does not visualize his problem with the idea of seeking to turn out an organization in which every man has a thorough, equal and uniform training for war. The present method is too much of a hit and miss affair. If the cavalry is going to meet the many and varied demands that will be made of it in modern war we must make the training of the individual more of a scientific business.

The methods now in use with some officers are open to serious objections, first because there is no uniformity in the organization, men varying in the same troop to a great extent in various qualifications, some being good horsemen, some poor, some being good scouts, others hopeless, some being good shots, while with others ammunition would be saved and better results gained by supplying them with a handful of rocks. Secondly, such methods tend to deaden the initiative and interest of the individual soldier. He is drilled as hard and painstakingly at the subjects in which he is proficient as the most newly joined recruit who has, as yet, gained proficiency in nothing.

There is no incentive for him to apply his abilities and his energy in learning a subject; he is given no consideration for having learned it.

The time saving system, where results would be more certain of accomplishment, would be a system of rating cards for each man. When he has become a satisfactory horseman let him devote his time to the pistol or to some subject in which he is deficient. He would be a much more satisfactory soldier and much more interested in the game if he were given some credit for having learned a subject quickly and permitted to devote his time to other necessary things. It would conserve the energies of both officers and non-commissioned officers and save duplication of effort if they could be permitted to concentrate energy upon the backward men of the organization.

Individual proficiency should be made a goal for the soldier to strive for. Upon his attainment of the necessary degree of proficiency let him even have a slight let up in his labors as a reward, while the energies of the instruction personnel were being devoted to making the backward men proficient and the standard of instruction thereby more uniform in the unit.

The troop unit is the important training and administrative organization, as well as a tactical element. The squadron unit is a highly important tactical unit. The principle of command and organization, the giving of a unit to every leader and allowing him to command it, should be adopted throughout the regiment and especially with the squadron. The tendency upon the part of some regimental commanders is to deal too directly with the troop commanders and to disregard the intermediate leader, the squadron commander. The squadron unit is so essentially important as the cavalry tactical unit that

every effort should be made to lay stress upon it in peace time. The regimental commander, who commands only a group of troops in peace time, in war will be forced to command through the squadron unit. The logical thing to accomplish is to make the transition from peace to war with as little disturbance as possible and with as little necessity for change. It must be remembered that the squadron commander of our cavalry will have as much responsibility in war as the regimental commander of a foreign cavalry. He must be permitted in peace to train for this responsibility.

All matters affecting training and combat efficiency should come through the squadron commander as a matter of course. The major's opportunities of actually commanding his squadron should not be limited simply to the occasions when the squadron is detached from the regiment for a peace time practice march. The highest type of regimental commander will command through his squadron commanders to the greatest extent possible. He cannot hope to maneuver an aggregation of troops in war, he must work for preparation for war in this as in other matters.

The question of readiness for war service, of a regiment, requires some thought. Take for an example any regiment at any time of the year; our possible enemy or enemies will not let us pick and choose the time when our units will be at the highest percentage of efficiency. A case in point would be a regiment suddenly ordered to take the field in a winter month before target season had taken place for the year. That regiment since last target season, would have lost a great number of time-expired men and gained a great number of recruits. It would amount, in some cases, to as much as a third of the men

who had had no previous rifle or pistol practice. Yet they would have to take the field and be put in the firing line as well as any of the other men.

Our regiments are not ready under the present system to take the field at any time. We have no reservists to complete cadres (it must be remembered that filling cadres in the cavalry means also filling out the horse strength with green horses). The regiment under the present methods will never be a uniformly trained first line unit thoroughly dependable in any phase of work that it is called upon to perform. There will always be a large proportion of men deficient in some necessary instruction, the rifle, the pistol, the automatic rifle, horsemanship, scouting or something equally important.

The fault lies in the fact that we are prone to carry out the "season" habit to too great an extent. This is perfectly feasible in an army with men required to join at stated periods for stated training upon the receipt of which they pass to the reserves. But it is not practicable for us with our recruits received at any time and in any quantity and our trained men leaving whenever their enlistments expire.

These conditions are important. They strike directly at war efficiency. The evil effects inherent in the happy-go-lucky military system that any volunteer army has to work under, must be nullified by training methods formulated with the object of correcting the conditions to as great an extent as possible.

The training scheme in the regiment should have in view as high a condition of immediate readiness for war as is possible. To accomplish this end it will be necessary to have a little training in all the subjects all the time. We cannot have a target "season." Our men, irrespective of

their length of service, must be constantly practiced with their rifles. This has advantages outside of the subject under discussion. We cannot devote a certain season to scouting and patrolling without always being in danger of war finding us with great numbers of our men unprepared. The men untrained in horsemanship and the care of the horse may look very well in ranks but the first minute of detached work and the exigencies of campaign will show them up as broken reeds and they will have lowered the strength of the command by losing horses on the first march.

The thing to strive for is a certain uniform advance in preparation for war. This will require a closer searching and knowledge of the individual qualifications and instruction of each man, and a change of our seasonal training habits to varied training in every subject every week.

The regiment taking the field after months spent on training of this nature will be in better shape than one under the old system. It will still suffer from some of the disadvantages inherent in our American habit of extemporizing armies after the outbreak of war. The last war saw many Regular regiments entirely denuded, not only of officers but of a great proportion of non-commissioned officers. We must guard against this contingency. If our officers are promoted to higher rank and transferred and our non-commissioned officers commissioned and sent to different regiments, what will be left?

We will have junior officers promoted to higher rank. They should have the training necessary to handle their new responsibilities. We will have many reserve officers and many enlisted men assigned to command units. We must get hold of the reserve officer and keep in touch with him. We must have a high degree of training for our

non-commissioned officers and they must all be tested in peace time and their fitness for commissions noted on their records. Every effort must be made in peace time to make the transition stage from peace to war as orderly and as smooth an affair as possible.

In the cavalry especially we must train and habituate all juniors to higher command. This should include as many selected privates as possible. For more reasons than one it is advisable to hold exercises and drills in which all officers and non-commissioned officers drop out and privates take charge. This not only arouses the interest of the privates but it grounds them more thoroughly in their duties. The advantages of such a training for an organization in the event of casualties in which all the officers or non-commissioned officers are lost needs no argument. It should be a settled policy of the cavalry to train all juniors to higher command and this should be a regular part of the training prescribed.

The necessity of developing the self-reliance and initiative of the cavalry soldier should never be lost sight of. To enable him to have these qualities in the field they should be developed in the post. Application of imagination and energy on the part of officers to stimulate interest and enthusiasm in the men—this is the key to the situation. The spirit of competition is an important aid; give rewards for individual and unit proficiency. This is an old method. "Xenophon has[1] described the steps taken by Agesilaus to train a body of cavalry in Phrygia. . . . When he had collected his forces at Ephesus, he drilled them continually and to incite them to take pains he offered prizes to the troops of horse to such as should ride best. The places of exercise were consequently crowded

[1] "History of Cavalry," Denison, page 34.

with men practicing, the horse course full of horsemen riding about and javelin men and archers aiming at marks. This cavalry, so carefully drilled, aided materially in gaining the successes which followed in the campaign." Agesilaus evidently understood the principle of touching up the enthusiasm and energy of his subordinates.

Competitions and prizes are one means of achieving this. There are many others; judicious commendation is a good one. Above all, an officer must be observant and quickly note exceptional energy and ability. Stimulate the sporting qualities of the men by contests for performance in various training subjects. Carry a stop watch and make speed an essential in training as it is an essential in cavalry work. The difference between ten seconds gained and ten seconds lost in dismounting to fight on foot may mean the difference between several men and horses added to the casualty list or saved.

An officer must be familiar with the time element in his work. He should know, for example, how long it takes him to open fire from different formations, how long to mount and charge, which are the best formations of led horses to facilitate quick mounting, etc. He can lend much interest to his work, stimulate the abilities of his men and speed up on many of his combat formations by competitions between units. He must always deduct points for any neglects. He should strive to have his men at all times capable of accomplishing results swiftly and correctly.

The one idea of striving for war efficiency should be kept in mind. Anything that does not lead directly to this should be examined with suspicion. Examine every phase of training work with this in mind.

An examination, for example, of the question of fire

action shows that we are undoubtedly following good infantry standards but shows also that we are forgetting cavalry requirements. One of these is the led horse question. Many cavalry units go dismounted to their combat firing. No lesson is learned in regard to their care in combat. Combat firing practice should be combined, wherever suitable terrain exists, with cavalry tactical work. Every lesson in fire action should be learned as the culmination of a tactical lesson—which it would be in war.

There are many things that interfere with this striving for war efficiency. One is our system of guard duty—a relic of the turreted castle, the moat, the wall and the drawbridge. It has no value in war. It absorbs too much time from training and is too great an interference with consecutive and uniform progress. It is to be hoped that we discard it in the near future. Excessive amounts of fatigue duty constitute another interference with training. A regimental commander must watch this very closely and cut it down to the minimum absolutely necessary.

The combination of the two factors above, guard and fatigue, make it extremely difficult for a troop commander ever to turn out enough men to form his small but important unit, the squad. This is the basis of the troop organization. It is also the basis of combat formations; the squad leader on the firing line, on the march, on patrol and elsewhere in the service of cavalry on campaign is a very important subordinate commander. If he is made into a fifth wheel by seldom, if ever, having men to handle, he will not be the mainstay and backbone of the troop that he should be.

It is hoped that the system of receiving recruits and

remounts will be modified by the enlargement and use of cavalry recruit depots and by the augmentation of our remount service so that it can provide us replacements of trained horses in war time. This, or some other system that will accomplish the same results, will have to be adopted in peace time if we are ever to be worth anything after the first month or two of campaigning.

We must not be so obsessed with training matters and methods as to lose our perspective. We must occasionally ask ourselves "What are we training for?" We are training for war, for battle. We are in danger of spending so much thought on the forging of the weapon that we are liable to forget learning how to use it. Our need is tactical training to learn to use that exceedingly sensitive, finely tempered and powerful weapon, the cavalry. This training should extend through all ranks. It should start with a cavalry doctrine upon the tenets of which all training and all work should be based and to which all should subscribe loyally and energetically regardless of personal viewpoint.

CHAPTER III

TROOP TRAINING—MORALE FACTORS

In a truly scientific training for combat we must work in peace for what is required in war. We know, for example, that some of our divisions in France covered themselves with glory. We know that other divisions barely "got away with it" to put it mildly. What was the underlying cause that made this difference between two groups of men of the same nation, in the same uniform, armed with the same weapons, and fighting against the same enemy? The whole difference lies in the word "morale." One division had a high degree of morale, the other lacked it. When the German morale broke they retreated. In war the moral is to the physical as three is to one, or so Napoleon states; and it is easily proved.

We all vaguely realize the importance of morale in war. What we do not all realize is the necessity of morale in peace, the necessity of training for morale. It is simply another phase of the requirement that the transition from peace to war is to be made as smoothly as possible. To do this we must make peace-time training fit war-time needs. And the great need in war is high morale.

What is morale? It is made up of many factors. Chief among these are, loyalty to, and confidence in, the officers, self-confidence upon the part of the men, confi-

dence in their weapons, esprit de corps, and a high degree of physical well being.

These are all dependent upon and superinduced by the following: loyalty to the officer, consideration, justice, understanding and exertion of energy on the part of the officer for his men. Confidence in the officer by his acquiring a happy faculty "of delivering the goods"; men will stand any degree of hardship and effort if they know that they are being well led, witness the soldiers of Stonewall Jackson. Confidence in their weapons, by a high degree of individual training. Esprit de corps, by a deliberate fostering of this quality, means for which will be hereinafter suggested. Physical well-being, fitness for field service upon the part of the individual before taking the field, a knowledge of how to care for himself after arrival in the field and solicitude for his comfort and welfare upon the part of his officers.

The use of these expressions creates an impression in the minds of many that we are floating into a sea of abstractions. They sound like copy-book maxims. It must be remembered that copy-book maxims contain many of the "eternal verities." A neglect to follow the copy-book maxims brings down its own punishment. A neglect to realize the foundations of martial achievement leads to mediocrity. What we are striving for is the highest degree of efficiency. In striving for that let us take these seeming abstractions and reduce them to concrete application on the problem before us, the training of the cavalry soldier for war.

One of the most striking things about war is the great degree in which a national army expresses the national characteristics. One of the greatest causes of victory is the superiority of one set of national characteristics over

that of another. If, as we believe, our national characteristics are superior to those of most other nations, then it logically follows that we must take full advantage of them for training our armies so as to utilize this power to the greatest degree in war. The consideration now is how to use these inbred characteristics of the American so as to make a better cavalry soldier of him.

The American of a few generations is the descendant of pioneers. The American of recent assimilation is himself, or comes from, pioneering blood. This because it takes the pioneering virtues to force a European peasant from his village, in which his people have lived for generations, and start a new life in a new country. The latter class very quickly assimilate American customs and habits of thought. To all intents and purposes they are the same as the native American stock.

The classes of Americans from which our soldiers come have a higher standard of education, a higher standard of living, and have inherited and acquired a greater degree of energy, initiative and intelligence than those of foreign countries, with the exception of British Colonials.

If we disregard all this, and simply drill until we have drilled all of this out of the man, we are blunting the inherited instincts of the man, are making an automaton of him instead of cultivating the degree of initiative and intelligence necessary for the cavalry soldier above all, and we are disregarding and throwing away means whereby to achieve our objects more quickly and more efficiently.

The solution is to develop a type of discipline and training suited to the nature of the American soldier. The difference between the types necessary to the European peasant, for example, and to the American, is the difference between the discipline of intelligence and the disci-

pline of habit. It is necessary, with the slow-witted peasant, to handle him in masses, to depend upon him alone as little as possible, to reduce the number of things that he has to perform to the minimum that can be learned automatically. These things are then drilled into him with unceasing repetition until his mind and muscles co-ordinate automatically, until his subconscious personality reacts for him and he does not have to think.

Like all other things, this contains an element of good. Every soldier is the better for some of this type of work, especially relating to those things that have to do with the handling of his weapons. The fault is not in the use of the correct proportion of this type of training. The fault lies in blindly considering this as the sum and substance of training. The danger of it for the cavalry service especially, is that too much of it deadens individual initiative. That there is too much of it is due to several factors: lack of thought on the part of officers, the fact that it is the following of the line of least resistance, since it is much easier to get out and command a unit through a morning's drill than to sit up half the night thinking of new methods of teaching; and that it presents something material for the eyes of the inspecting officer who does not always realize that an outfit capable of a high performance in close order drill might fall down badly in actual campaign. The chief fault lies in making it the end rather than only one of the means.

To hark back, we are training for war. In peace we must cultivate the qualities that will be essential in war. If we can combine the cultivation of those qualities with the instruction of the soldier in all things pertaining to his war requirements, then we are cutting down our labors and taking fuller advantage of our time. As it is now,

many officers waste valuable hours in disciplinary drills when they might secure the same amount of discipline while at the same time teaching a soldier practical fighting methods. This will have the effect of raising morale, because the American is by nature essentially practical and much more interested in the practical side of his profession or work.

The Value of Interest in Training and Morale:

In the word "interest" lies the key to the development of more scientific, thorough and rapid training. Psychology teaches us that interest and memory are intimately connected. Interest makes a strong impression which recollection revives in the form of memory. Interesting things make a deeper groove in the brain tissue. Cast your mind back and try to remember all that you did in the last week. Analyze the incidents you remember and you will find that they are the things in which you were interested.

Our work is principally with the soldier's memory. We teach him to-day so that he will remember to-morrow to carry out our teachings. We teach him in peace and depend upon his memory in war for carrying him through and adding to the defence of his nation. If our work is principally with the soldier's memory, then we must use all the aids that will properly stimulate that memory. Of these the greatest is interest.

It is especially valuable in the cavalry, owing to the high degree of intelligence the individual trooper will be called upon to display. General von Schmidt,[1] who is said to

[1] "Instructions for Cavalry," von Schmidt, page 7. Quoted in "Our Cavalry," Rimington, page 177.

have exercised a greater influence for good upon the German cavalry than any leader since Frederick the Great, has this to say, "Everything that is dull, cannot be easily understood, or is uninteresting, must disappear; the cavalry soldier has less need of this than anyone. With such instruction he is quite useless, for to him more than to anyone else are freshness, life, activity, mental quickness and vivacity necessary."

Many of our men, who could not give a simple summary of the duties of the private on the firing line, could reel off without thought the batting averages of every player of note in the big leagues. The first does not appeal to his interest, the second does. With a proper degree of imagination on the part of the officer there is no reason why all the interest-producing means in the cavalry can not be used properly. The horse, the rifle, the sabre and the pistol alone are romantic enough in their appeal to a red-blooded young man.

Skill at imparting knowledge must be the ambition of every officer who hopes to be successful. Few of us realize this. We go to drill daily, unprepared, bore our men excessively through a long period and are somewhat pleased at ourselves because they did not fail to react to most of the commands! We do not realize that we are breaking down morale by slighting the capabilities of the individual, by under-estimating his intelligence and by treating him as a block of wood.

A great deal of the superiority of the American soldier arises through the fact that he is a person given excessively to thinking for himself. He is very apt to discover what is essential and what is non-essential after a few weeks in the ranks. Unless properly instructed he is very prone to classify even essential things as non-essentials. As a

consequence when you hold him for long and straining periods upon what he rightly or wrongly conceives to be non-essential and trivial, his intelligence rebels, his interest flags and you have succeeded in inculcating bad habits of body and mind that it will be exceedingly difficult to eradicate.

He is easily interested in practical things. A little time spent with him in the explanation of the practicability of certain things that have only an indirect influence upon war is time well spent. The safest plan is to assess the value of any subject by the measure of its direct applicability to war.

The value and power of interest in instruction needs no proof. A short study of any manual of psychology will demonstrate the basic necessity for it. Interest is a necessary thing in any successful scheme of instruction; look back for instance upon your own instructors and analyze the amount you have remembered from those that bored you and those that interested you. It is necessary that we look upon our rôle of teaching seriously and study teaching methods. It is necessary that we concentrate our faculties upon adding interest to our work and in minimizing the things that result in lack of interest.

Chief among these are long periods of mounted drill. They are useful so long as they contribute to the ease of handling masses of mounted men. The time spent upon mounted drill should be analyzed carefully. It should not be allowed to take up hours that could be spent upon subjects that have a proved and high ratio to battle efficiency. This, as all other things should be examined closely with one thought in mind, "Is this leading to readiness for war?"

The proper application of the principle of cultivating

the interest power reacts directly in favor of higher morale. It increases the trooper's knowledge, his self-respect and his self-confidence. It puts a greater value upon his officer in his estimation, it teaches him to handle himself and his weapons in far more thorough manner.

One of the means of cultivating interest and improving instruction is the application to training of the principles of team-work, in other words to make use of the spirit of the team at sports. Team-work is a word used very much and very wrongly. The guiding influence of the spirit of team-work, and its stimulus, is the spirit of competition, the spirit that makes men risk life and limb for the gaining of a slight advantage over another group of men. See men training for long and inconvenient hours upon the football field, see them keenly alert on the baseball diamond and then contrast this with their normal attitude while at work. The good officer should have his men just as keen at work as they are at play. He can do it by using his imagination. Remember that you are striving for interest. And there is nothing more interesting to the average American than to beat another man or group of men at the same game.

The neglect to use the spirit of competition, which is so strong in the breast of the average American, is only comparable to the neglect of a man owning an eight-cylinder car who through choice or ignorance, should be content with running only upon four cylinders habitually. There is power latent in every man and every organization which only a development of the competitive spirit can bring out.

Make every squad and every platoon in the troop a small team. Let them compete, mark them, rate them and reward the winners by some means of your own de-

vising. Properly carried out it will mean a new lease of life and a new influx of power for the organization. It will interest the men in their work. You will find them after hours practicing behind the stables or in the barracks. You will have non-commissioned officers asking to take their sections out on holidays and after working hours. You will have power developed and coming from below as it should come. It will increase the energies and capabilities of your organization to an undreamed of extent. It will make for contentment. It will raise morale by leaps and bounds.

There are officers who will say that it will hurt the organization spirit as a whole. It does not, as proved by experience, but rather increases the amount and makes more spirit available when the time comes for combined action. It will develop esprit de corps as nothing else can.

The Cultivation of Loyalty:

To discount the loyalty and esteem of your men is to betray a serious lack of judgment. We are preparing for war. In war there arise situations in which the force of orders and regulations, the fear of courts-martial and the mechanics of military control will fail or waver. Nothing but men are left, the leader and the led. If the leader has been tried and found wanting in peace time, in time of extreme danger in war his unit will break under him. It is always possible that a time will come when the personal feelings of the men for the officer decide the day. This possibility alone is worth preparing for in addition to the many other advantages of loyalty.

Remember that the confidence of men in their leader and esteem for him grow if they realize that he is doing

all within his power to ameliorate any harsh conditions that might arise. This is true even if the results are almost negligible. The men impute the blame to Providence for the unpleasant conditions and their esteem for their officer grows for his efforts. There is no quicker or more certain method of losing the confidence of men than to let bodily fatigue or desire for comfort keep the officer from laboring until all his men and animals have been granted the highest degree of comfort possible.

One of the many virtues of the army before the war was the paternal solicitude displayed by the troop commanders for their men. These older captains were more abrupt and distant in outward seeming than the present generation. But they succeeded in gaining and holding the respect and affection of their men to a greater extent, principally because they devoted so much time and energy to the well being of every man and animal. Each trooper realized that the "old man" had done everything in his power and was looking after him.

A thoughtless and careless misuse of the punishing power leads to bad conditions of discipline. An ounce of prevention is worth a pound of cure. An organization which has the proper spirit will refrain from evil doing if they are convinced that it not only hurts them but hurts the organization as a whole. There is a whole lot to be done in appealing to the better side of the men's nature. This savors of "coddling" to some. But it is sound doctrine nevertheless. Soldiers are ordinary human beings, nothing more nor less. A whole lot of the youthful spirit that finds outlet in the soldiers in the form of minor misdemeanors, is punished as a crime. The reading of the Articles of War once every six months is not sufficient to obviate this, any more than the perusal of

the college regulations deters a student from breaking them. An organization in which the issue is put squarely up to the reasoning power and intelligence of its men will seldom offend. An example in point was an American battalion of infantry once marching through an allied country. Great trouble and many complaints arose through pillaging orchards and gardens. Men had been warned and some punished. Nevertheless it still continued. An old woman came into camp weeping one evening. The soldiers had pillaged her garden and taken her winter supply of food. Her sons were at the front. The whole battalion was lined up, the results of their actions forcibly pointed out to them and a parallel drawn in which foreign troops were imagined tramping over the United States and the result of their acting in the same manner. About ten minutes after the battalion was dismissed a sergeant brought in a hatful of money, the result of a voluntary collection taken up from every man in the battalion. It was given to the old woman and proved to be enough to see her through many winters. That was the end of pillaging for that battalion.

It is believed that the American soldier has a higher standard than we sometimes give him credit for. The officer who treats him like a convict will have to watch him like a convict as he certainly will act like one. The officer, on the other hand who adopts as his policy a firm, just but considerate attitude will find that he has a far higher standard of discipline, real discipline, discipline that will not break down when his back is turned. Cultivate the self-respect of your men. A fighting man cannot fight without self-respect, it is one of the constituents of courage.

It is a good thing for an officer to feel a heavy load of

responsibility for the actions and behavior of his men. He must cultivate the feeling that perhaps every man of his unit in the guard house is a direct and tangible sign of his failure as a leader. An army is an autocracy. It cannot be run by kindness. It will run a lot more smoothly and with a minimum of lost motion if the qualities of consideration and understanding are shown.

No troop officer can feel satisfied until he can visualize the character and personal characteristics of every man in his organization. It will repay him to take up the intensive study of his constant offenders and really determine whether they are criminal types that should be eliminated or whether they are not just youngsters with an excess of animal spirits which could be diverted into more useful channels to the credit of the organization. He should feel that every man of his in the guard house is the direct result of mishandling somewhere along the line. He must remember that his value to the government is lowered by every failure upon his part to understand and secure results from the men entrusted to his charge. If they add to the expense of administration, the work of courts and all the legal machinery, and in addition are failing to be trained as soldiers, it amounts to a distinct loss to the Government. It is a distinct loss in fighting efficiency as far as the organization is concerned. He must remember that he is supposed to make soldiers and better citizens out of the men entrusted to him. He must not throw them impatiently into the guard house without analyzing carefully his own responsibility in the matter.

Every troop commander should have his desk somewhere separate from the First Sergeant and troop clerk, where any man in the organization can come and talk to

him personally and alone. Men do not mind punishment, and punishment will have a corrective influence rather than the reverse, if they feel that their officer is "square" that he has carefully weighed the case, heard the soldier's side and explained the necessity for the disciplinary action taken. They do become sullen, resentful and discouraged if they feel that they have not had a hearing and been denied justice accordingly. The officer has great power over his men. Power implies responsibility. He must not exercise his power without a due sense of the responsibility.

That organization in which there is not a strong bond of sympathy, even though it be unspoken, of understanding and mutual consideration between officers and men is as "sounding brass and tinkling cymbal." It is not solidly founded, the first real test will knock it down like a card house.

Remember that after all you are not judged so much by the words that you utter as by the actions you perform and leave unperformed. The American soldier really has more confidence in the officer who is not "easy," the exacting, strict and impartial type of officer. All he wants is a "square deal," he does not want someone to weep on his shoulder and "hand him a line of bull." You cannot pose before your men and get away with it. They will see through your pretence. There are a hundred pairs of eyes more or less watching you daily. You are discussed, in the barracks, in the field, and at the stables. Your imperfections are noted quickly, and as quickly forgiven if you counterbalance them by virtues that transcend them. Men have more confidence in a strict officer, they feel that he is "on the job." If he can carry that impression into the field with him he need never to look behind him, he

will know that his outfit is with him. Men are so constituted that they want a leader, a real "he man"; bars on your shoulder are nothing if there is nothing to back them, distinctions between officer and men are broken down in the ordeal of battle. After all is said and done you will get loyalty if you are deserving of loyalty. And to deserve loyalty you will have to develop a knightly sense of "noblesse oblige," a feeling of responsibility towards the subordinates entrusted to your care. The time to develop that is in the post, on the march and in the camp in peace time.

Esprit de Corps:

Esprit de corps will often carry an outfit through when many other things fail. It is one of the best aids to peace time training. It can be fostered by successful participation in sports, a winning baseball or football team will start the spirit better than almost anything else. Competition with other units in training subjects will foster it. It is a plant that needs judicious watering. It can be increased by the use of suggestion. Suggestion is a powerful tool to build with if properly used. Every officer should study psychology, especially the psychology of the crowd if he wishes to be a successful leader. Whenever your unit gains a slight success intensify the effect by remarking upon it and use the spirit thus engendered to win again. Appeal to it often when it has gained sufficient strength.

An example of its use was the case of a troop of cavalry that was to march through and camp near a certain village in the Philippines. Seven other troops of the regiment had marched through there on different days. Each one

had had trouble owing to the virulently fighting qualities of a certain brand of native gin that was dispensed there. This troop was lined up after its arrival in camp. The men were told that the regimental commander had advised making a detour. They were told that the troop commander had replied that he had perfect confidence in this troop and would camp there without any trouble. The men were then asked if that confidence was to be justified. The men said nothing. That was the only troop of the regiment that succeeded in making the march without trouble. An appeal to their manhood as well as to the esprit de corps.

Example and its Effect upon Morale:

To realize the powerful effect of example an officer should again be advised to study that part of psychology which pertains to the crowd and the crowd mind. The effect of the example of the leader is far-reaching and important upon the led. This should be kept in mind constantly by the officer. His bearing, his dress, his mannerisms are all unconsciously copied by his men. If he is tired on a long march he cannot show it, as it flies like wildfire down the column. If he is anxious, if things are going wrong in combat he cannot show it as it has worse effect then than at any other time. In time of uncertainty and danger the leader is especially watched. Men's minds become almost childlike. They want someone stronger than themselves to direct. In time of hardship the officer with a joke on his lips and a cheerful demeanor will bring in men and animals comparatively fresh. The snarling, irritable type, who has not strength of character enough to keep his real feelings to himself,

will bring in a crowd of tired, sullen men. The mental is so closely allied to the physical and the effect of the leader so great, that the one type of officer will raise the spirits and morale of his men and keep them fresh and fit, with some reserve strength always left, while the other type will have them dropping by the wayside. Remember that the officer is watched by a hundred eyes. He is only one amongst many. He cannot be too careful as to the character of the example he sets.

Remember that growling and grumbling lengthen the miles and add to the hardships. When you take hold of an outfit in which this spirit is rampant, break it up. Call your non-commissioned officers in to aid (in this as in everything). Tell them that there is too much growling in the outfit and you want to break it up. They will go at it with ridicule, with jokes and with methods that you cannot use. Do not forget to call your non-commissioned officers in when you want to adopt a policy. They are pleased by the confidence shown and will lie awake nights thinking of means to aid if you handle them properly. They are more nearly in touch with the pulse of feeling in the organization than you are, they are closer to the men. Make them your allies in all cases. Do not be too proud to ask them for suggestions. Many of them have been at the game many years and have picked up a lot of knowledge of sorts.

Physical Well Being and Its Effect Upon Morale:

Every effort must be made to raise the physical standard of the men entrusted to you. Not alone because this turns better citizens back to civil life but because a man is a more cool, resourceful and courageous soldier when

he is physically fit. You must have a good athletic organization. The solution of the physical problem is sport and more sport. Games in which one unit competes against the other are good. Football, baseball, basket ball, boxing and swimming are all valuable. Every soldier should be taught the rudiments of boxing at least. It increases his poise and self-confidence to an undreamed of extent. Your men must be practiced at running not only for the value to them but because of the tactical value of having men well able to move swiftly dismounted. It is especially valuable in advance guard work where a cavalry unit can dismount and by a quick run outflank the enemy and drive him out. It is valuable against hostile infantry, tired with marching and burdened with a pack, a cavalryman can run all around them and shoot them up if he is fit. Swimming is valuable in case of destroyed bridges in war. It gives a man confidence in crossing water even if he does not have to swim.

Remember that the army that is the more physically fit has a big edge on the enemy from the start. It is a prime consideration in considering the factors that build up morale.

The Effect of Dress:

An officer must not forget how much his self-confidence and efficiency is lowered when he is dressed in an ill fitting uniform. The same thing applies to the men. One of the first things to do with a newly joined recruit is to get him to the tailor and have his uniform fitted properly. One of the first signs of reform in the case of an old offender is the fact that he begins to shine up and shows his renewed self-respect by the neatness of his clothing.

There is a lesson in this. A snappy outfit, that dresses well will, in nine cases out of ten, reflect their efficiency in other ways. It is a small point but is one of those small points whose cumulative effect makes the difference between a good organization and a poor one.

Conclusions:

We have gone into the subject of morale enough to show that it is an important matter. It is well worthy the study of an officer. Time spent upon this phase of his work is time well spent. He must study his men from day to day, he must not only study his subordinates but he must study his seniors and analyze them and their effect upon him. There are some that get a high degree of work and enthusiasm from him: why? There are others with regard to whom he feels that any slight exertion is an immense labor. Why is this? He must weigh and analyze and out of it all must formulate for himself a working code that will fit any group of men anywhere. Once he has done this he has added immeasureably to his equipment as an officer and as a leader.

CHAPTER IV

TROOP TRAINING—THE OFFICER

The man who rides into danger for the love of it, the man who keenly enjoys cross-country going and polo, contains in his disposition the germs of success as a cavalry officer. After all the tumult and the shouting of tactics and strategy, of paper work, of schools, of automatic rifles and all the thousand and one things that a cavalry man has to be proficient in, the fact still remains that he has to have, as a base, the love of the horse and all that pertains to him.

Chief among these are the mounted sports. These are valuable to the cavalry officer, first, because they are a test of heart and courage, secondly because they teach him to think at the gallop, to judge pace, to study ground, to know the capabilities of a horse and above all to keep him fit to take the field even at an advanced age.

No officer who is not an enthusiastic horseman has any place in the cavalry. This is based upon purely practical considerations. The horse enthusiast is the man who will study the horse and make the most of his capabilities. The enthusiastic cavalry horseman is the man who will get better results from his horses and bring them in in better shape than the man lacking in this spirit. There is another reason also, the fact that mental efficiency de-

pends so much upon physical well being. The horseman is usually a fitter man at greater age than the man who has no such interest. This may be one of the reasons why so many cavalrymen rise high in every war. At the time that age begins to dim the faculties of another man, the cavalryman, who has been a consistent horse lover, is usually more mentally alert through having kept physically fit throughout his life.

Every opportunity to indulge in mounted sports should be granted to our officers. Polo at last seems to have come into its own, officially recognized and fostered by the Government. Polo is the finest sport for the cavalry officer. There is another, however, that is almost equally valuable. That is fox-hunting. There are any number of excellent hunt clubs, whose members are hospitable, whose packs are excellent and whose country can give a multitude of thrills any morning, that are situated along the Atlantic seaboard. It is hoped that some system of rotation of regiments will be worked soon to enable officers to get their fair share of eastern service. They should avail themselves of this hunting whenever possible. A substitute can be found in the Western posts by organizing paper chases. A good paper chase laid over a stiff course is a fair test of horsemanship. In the American Forces in Germany a good course is laid out over the hills back of Forts Ehrenbreitstein and Asterstein every Sunday and many officers, from the Commanding General on down, turn out.

There is no comparison between the somewhat cold and mechanical jumping that an officer gets in the show ring, the riding hall or jumping pen compared to the same thing across country, with a good crowd all riding hard. It is a better test of horsemanship and gives an officer a

good eye for country as well as a better knowledge of his horse's capabilities. It teaches him to ride boldly and is thereby a direct aid to cavalry work in campaign.

The cavalry officer must keep himself fit. The possession of a horse and polo pony or two will not do this unless he throws himself body and soul into sports. He will be subjected to more strain, more exposure and more privation than the officers of other branches when on campaign. If he is not prepared beforehand the unaccustomed strain will break him when the country most needs his services.

Next to keeping himself physically fit and of equal importance, is the question of keeping himself mentally fit. The work of cavalry on campaign is largely a matter of good judgment upon the part of its officers. The cavalry officer has more initiative in war than most officers. He is less under the direct supervision of an immediate superior. It is precisely for this reason that his initiative should spring from knowledge. The infantry officer is thoroughly trained in combat work. The work of the artillery officer is almost purely combat work. The cavalry officer, who has to be trained to use a great many more weapons and combinations of weapons than either, is not sufficiently trained tactically. He may become a good machine gunner, a good musketry instructor, or a good horseman. What he is in grave danger of not becoming is a trained cavalry tactician, capable of using all these weapons and all forms of attack and knowing when and where not to use them.

The cavalry officer must be a highly trained specialist. It is not believed that we specialize enough in our army. We require an officer to be capable of handling any job at any time from spending a few million dollars in dis-

bursements to taking charge of an aviation camp. This undoubtedly has some value in giving an understanding of these tasks. But the success of any commercial venture depends upon picking the trained man for the right place, the salesman for the road work, the advertising man for the publicity, etc. Looked at from the same viewpoint the cavalry organizations of our army should only be officered by cavalry officers. And simply carrying the crossed sabres on the collar does not imply necessarily that a man is a cavalryman.

What then is meant by a cavalryman? An officer who is first and foremost a horseman, who is able and fit to march his unit great distances and bring it in in shape to fight, who has an instinctive knowledge of what formation and weapon to use in emergency and who is fitted by his training to cooperate tactically with other arms for the good of the whole, a man, in short, who is interested in cavalry as a *fighting* arm. If an officer is not interested in the combat possibilities of his branch he has no place in it.

In no other branch does the influence of the leader exert such an influence as it does in the cavalry. For this reason it is extremely difficult to assess the value of any given force of cavalry. This influence is marked at all times; it is marked in war to a much greater extent than in most other branches. How many times in history has good cavalry, poorly led, produced results worthy of the poorest cavalry? Cavalry cannot be officered by leaders who are liable, by lack of trained judgment, to throw it away in the hour of need. Its relative size makes it much more valuable proportionally. Given 900 cavalrymen to 20,000 infantrymen, the relative value of each cavalryman to his division commander is much greater

than that of each infantryman. It is more difficult, moreover, to replace both the cavalryman and his horse. For these reasons there must be no waste of cavalry through poor leadership.

The cavalry officer of almost any grade requires a higher degree of combined tactical training than the officer of most other branches. He, opposing, or cooperating (commanding an independent unit in many cases) with all branches, has to have a deep knowledge of tactics as a whole. How are his reconnaissance reports to be effective and valuable if he has not the remotest idea of what bearing his report has upon operations? How can he show as he is required to do, initiative in absence of orders, if he has no foundation of tactical training upon which to base initiative? How is he to base reconnaissance reports from the viewpoint of higher command if he has no conception of what the higher command is driving at?

The tactical training of a cavalry officer should be thorough. He should be tested in the tactics of his branch. Upon his failure to pass a certain number of tests he should be transferred to some branch or position where he will not need so high a degree of the quality of tactical leadership. He should read and study the possibilities of his own branch. It might be advisable to have him write an occasional thesis on stated phases of cavalry work or history to stimulate his study. The war game should be part of the equipment of every garrison. He should have a fair acquaintanceship with the tactics of other branches, to enable him to cooperate intelligently with or fight against them.

Excellence in tactical things should open a door of further advancement to him if he perseveres and shows

ability. Excellence in the regiment should lead to the Cavalry School with the future possibility of making the General Staff as a goal. European armies can teach us a great deal as regards the proper stimulation of the ambitions of officers.

The value of all this is that study and reflection lead an officer to form a doctrine or a set of principles, to evolve for every situation a rough working plan that becomes part of his nature. When the emergency arises he will have no time to reason. He will have to act instinctively. His instinct should be trained so that no situation finds him lacking in resource or in the means of solving it.

It is Von Moltke who is reported to have said, "People say that one must learn by experience; I have always endeavored to learn by the experience of others." In that saying lies the whole sum and substance of the reasons for study. It is to learn by the experience of others. If ten minutes of study now can mean the saving of the lives of fifty men and horses, the winning of a decision over the enemy, reputation gained and safety to the army, in the future, then ten minutes' study is well repaid. It can mean all of these things.

Sir John French has written a preface to a work of von Bernhardi's that is well worth reading, "Let him (the cavalry officer) continue to study profoundly the training tactics and organization of the best foreign cavalry. Let him reflect long and deeply upon the opinions of such acknowledged authorities as Field Marshal Sir Evelyn Wood and General von Bernhardi. Let him keep abreast with every change in the tendencies of cavalry abroad, so that he may help us to assimilate the best of foreign customs to our own. Finally let him realize the

great mental and physical strain that modern war will impose on the cavalry, and let him preserve that 'mens sana in corpore sano,' that equable balance between study and action, which alone will enable him to rise superior to every difficulty in the great and honorable calling to which he belongs." [1]

It is to be hoped that the many and excellent reports made by our observers in cavalry work abroad will be put in such shape that they can be disseminated among the cavalry officers for their instruction.

It is well for the military student to remember that his main task is to strip all subjects of their non-essentials. He must endeavor to reduce all subjects to their most simple and basic elements. The tendency in military writings is to overlay the profession with a mass of verbiage and practice that has no relation to the object in view.

The young officer must keep the idea of war constantly in his mind and not allow his energies to be diverted from preparation for war. He must constantly practice both himself and his men in every situation that could possibly arise. He must have imagination. An officer lacking in imagination will not only be a poor trainer of troops in peace but he will be a poor leader in war, through a lack of ability to visualize the probabilities of the enemy's actions. Imagination can be cultivated by study and reflection. A proper forecast of the future can be acquired by studying the past.

We have discussed the mental and physical needs of the officer. What more is necessary? In addition to being a sportsman and a student he must be an organizer, a leader and a teacher.

[1] "Cavalry in War and Peace," von Bernhardi—preface.

It is very surprising how many younger officers have failed to grasp the essential principles of organization. The cavalry drill regulations lay down clearly the mechanics of this but few grasp the spirit. Many excellent officers work hard drilling and training a troop of one hundred men instead of handling an organization composed of several platoons of two squads each. The gaining of results through subordinate leaders, the principles of the allocation of duties, and the utilization of all the energies of all the subordinates not only to train the men but to train and make efficient group leaders in war is a subject that will well repay the time spent in its study.

It is highly important that the officer should learn early in his service to have his will carried out through the medium of subordinate leaders. He must rarely command men directly. He must always work through their immediate commanders, the non-commissioned officers.

The attitude of many officers is fundamentally wrong from this viewpoint. The officer in too many cases usurps the prerogatives of the sergeant, to the lowering of his own prestige and the lessening of the value of the sergeant. The officer places too much stress on the handling of the individual soldier and his training and instruction. He considers his own training as a group leader or tactical leader merely incidental. He will never have well-trained subordinates nor will he acquire that high degree of tactical training necessary to a cavalry officer unless he defines his relation to this phase of the work.

If he usurps the duties of the non-commissioned officer he leaves that excellent individual nothing to do but act as a fifth wheel. He devotes time to doing the sergeant's work that he should devote to perfecting himself as a combat leader, the practice of having his will car-

ried out through the medium of subordinate leaders being an essential.

The enthusiasm and energy of many officers leads them to take the sergeant's command from him and handle the men directly. This is bad for the sergeant as he will inevitably lose interest and his energy is no longer available for the organization to use. In the British army they carry things almost too far to the other extreme. They leave things in the hands of the non-commissioned officer that we would never dream of doing. The British non-commissioned officer is certainly developed by the system, however, into a most dependable person. We have better non-commissioned officer material than the British but we do not develop it to the extent that they do.

Next comes the question of leadership. Leadership is rather an indefinite term. Reduced to its simple terms it resolves itself into the faculty of securing prompt, willing and intelligent obedience.

The officer must not take obedience for granted simply because the Articles of War and Army Regulations require obedience. It is not the ever present factor that the layman might imagine. Obedience, perfect, implicit, willing and intelligent is one of the most difficult things to secure. That it is not always secured is generally the fault of the leader. He has perhaps not expressed his order clearly enough. It was perhaps clear in his own mind but he failed to convey his idea to the subordinate. Someone quotes General Grant as saying that he wrote every order with one of his subordinates in mind, a particularly slow-witted and dense individual. He made the order so clear that he could convince this man. He felt that if he understood it anyone else could.

Another reason for failures in obedience is the bearing and manner of issuing an order. Many times an officer issues an order in an easy conversational way that leaves considerable doubt in the mind of his hearer as to whether he is not simply indulging in conversation. An officer must be careful of this, he must train himself to give incisive, clear cut and unmistakable orders that will not leave room for the slightest element of doubt. Apropos of this it is wise for an officer to remember that the more he uses his voice with his men the more accustomed they become to it and familiarity breeds a certain amount of contempt. The officer who is continually talking has nothing left when the time for quick action comes. He must cultivate the habit of letting his subordinates do most of the talking. When his voice is raised it should be raised decisively; he will soon find that if he follows this plan, when he does raise his voice, every man's and every horse's head goes up. His words are listened to. This may have an important bearing on some future time of stress and strain when order can only be made out of chaos by the influence of the leader's voice.

Implicit obedience is necessary. A higher type of obedience is the type that is both implicit and cheerfully willing. That can only come from loyal and contented subordinates. They strive in the Navy for what is called "a happy ship." It is considered a more efficient ship. The "happy ships" have a faculty of making excellent scores at target practice and of "delivering the goods" generally.

Work is important. Results are more important. Many officers do not differentiate enough between the two. An organization simply going through the motions at com-

mand is working satisfactorily according to that type of officer. With nothing more, that type of work is mechanical and productive of no lasting results. A contented organization does not dissipate its energy in grumbling, in going absent without leave; in keeping the guard house full and the courts martial busy. It concentrates its energy upon that one thing, a striving for battle efficiency. A mechanical performance of duties by command, rote and schedule may simulate a working for fighting efficiency but it will not realize that standard. The first crucial test will prove it unsound. The most important factor after all we have to work with in the service is the human factor. Study of it will repay an officer.

The next important quality for an officer to possess is the ability to teach. The necessity of inculcating a high degree of knowledge in all ranks in the cavalry admits of no gainsaying. The extreme dispersion of the cavalry formations in campaign, the high degree of knowledge required for intelligent reconnaissance and reporting work and the comparatively greater degree of responsibility resting on the lower ranks, makes it essential that they all be trained to cooperate intelligently with higher command. They must be trained to look at things from the viewpoint of several grades in rank above them. To accomplish this it is necessary first of all that the cavalry soldier be taught to think. He must not only be taught the use of his individual weapons but must be shown his important place in the great army team. He must be taught to produce a high degree of intelligent cooperation.

To sum up then: our ideal cavalry officer must be an

enthusiastic horseman, he must be a student, he must be an organizer, a leader and a teacher. In addition to this he must have the faculty of being a good team man. There are two kinds of polo players, there is the "grand stand player," perfectly willing at any time to ride off his own team mate and break up his team to make a goal himself and thereby gain the plaudits of the side lines, who imagine that making goals is all there is to polo. Then there is the other type who lies back coolly, rides off interference and thus permits his team to score. The latter type would be a good man to have in campaign. An officer must not only have the ability and desire for cooperation with his own branch but he must remember that his is not the only branch, that wars are won by the cooperation of all branches. Usually the most bitter critic of another branch is the man that knows least about his own. Langlois,[1] in his work, "The Lessons of Two Recent Wars," has this to say of the British army in the South African War, "Each arm acted on its own. . . . Comradeship can only be fostered in peace. . . . In England it exists neither between the different arms nor between one battalion and another. . . . Good fellowship in the fight can only be produced by good fellowship in time of peace and the latter results from a life in common." A good team will win against an aggregation of good players any time. And this applies with particular force to the great game of war.

The foregoing attempts to outline some of the qualities that go to the making of the excellent cavalry officer. Given an officer with these qualities, energetic and ambitious, of distinct value to the Government, what are

[1] Langlois' "Lessons from Two Recent Wars," page 70, quoted in "Our Cavalry," Rimington, page 175.

the factors that might tend to lower his morale or nullify his efforts?

One of the factors is undoubtedly a certain uneasy lack of confidence in the future of his own branch. The remedy for this lies in a study of the World War and a discounting of the thoughtless statements of ill-informed persons whose whole knowledge of the war is comprised in their own small share in a limited sector. A close study of the World War as a whole should convince the most skeptical, not only that cavalry did its share in that immense conflict but that as a result of it, and the new methods there made use of, the cavalry has, if anything, a greater future before it.

Another factor is the question of Mexican Border service. This is ceasing to be the bugbear that it was several years ago, when an officer had to leave his family in the North and live in the sage brush and sand in a tent for years. With a proper system of rotation of regiments on the border which it is hoped will be put into effect, with an increase and enlargement of the border posts, better barracks and quarters and stables, service on the border will lose some of its terrors. Its advantages must not be lost sight of at that; the exceedingly healthy outdoor life that it is possible to lead there at all times of the year; the knowledge that officers and men gain in campaign conditions; the excellence of the country for cavalry, with its broad open spaces, are some advantages that a cavalryman truly fond of his profession can appreciate. The great drawback is the lack of conveniences and comforts for an officer's family. This is a weak spot as the normal life of a man impels him to marry and make a home for himself. Many excellent officers have transferred from the cavalry for this reason and there will be

danger of more if the conditions so easily remedied are not taken in hand. There is no necessity for an officer living in war conditions at all times.

Probably the greatest factor, one of the reasons that officers do not like to serve with troops, has yet to be touched upon. It is a serious condition directly influencing the efficiency of the cavalry service. It is that energetic, loyal and efficient service with troops is only occasionally and almost accidentally noted upon an officer's efficiency record.

There is in the first place no scientific or standard method of judging an officer as a troop or unit commander. He is given a vague rating upon leadership, intelligence, etc., all matters of opinion on the part of his next higher commander. He may have had the organization with the smallest number of disciplinary reports, he may have had the best administered unit, he may be exceptionally keen and efficient tactically, his troop may be the best shooting troop in the regiment. None of this is likely to appear upon his record. His mark depends upon the vague and variable impressions of a succession of higher commanders, based in very many cases on limited personal knowledge of the officer concerned.

It is strongly to be hoped that this lack of system in so important a thing will soon be changed for the better. If not there is a serious danger that the energies of the younger officers will be blunted. There should be a fair, impartial and uniform test of an officer as a unit commander. He must be tested by results gained. He must stand or fall on the results of these tests.

His unit should be the criterion. Provisions for carry-out the proper tests could be made by higher authority. These could take the form of the issuing of tables con-

taining standards of proficiency in training in all its phases, training proper, troop management, horse management, tactical ability, disciplinary ability, etc.

A special form of efficiency record should be put into use. It should contain headings devised for ratings for all of the subjects considered essential to a cavalry officer. Take administration, for example; this could be filled in by the regimental commander from a special record, kept by the adjutant, of all administrative faults and virtues of that particular officer. This would indirectly have the effect of taking a load of worry from the adjutant's shoulders for the tardy submission of reports and communications, the necessity of returning papers for correction, etc. A simple notation every time there was a fault and a comparison at the end of a stated period with the records of all other officers would soon fix a standard for this.

Troop training would be one of the simplest things to judge. The application at stated periods of standard tests, the comparison of the total results with all other units in the regiment and a noting of the same on the efficiency record. Tactical ability could be handled by the same means, preferably by actual problems upon the terrain, these to be suited to the officer's grade and length of service.

The disciplinary standing of the officer's unit should be immediately reflected upon his efficiency record. This is a simple matter to determine, simply a comparison at stated periods of the total disciplinary reports with the average of the command and the marking of the officer on the results.

The sum of these requirements and others judged necessary would determine in a very fair and thorough man-

ner the standing of an officer as a leader of units in his grade. It would tend to eliminate the consistently inefficient and would give a goal to strive for to many excellent and hard working officers who now feel that their work is not observed and noted. This would end the feeling that it was necessary to get some "coffee cooling job" in order to be favorably commended. It would be a positive record instead of the negative record now in vogue and would end the feeling that service with troops was unrewarded service.

After the sheep have been separated from the goats by this method, then only officers of proved ability with troops should be sent to troops. Increase by this means the prestige of troop duty, make it an honor rather than a punishment. Remember that our duty is to fight; we require good leaders in war in the cavalry above all other branches. It would be the greater part of wisdom to weed out the poor ones and encourage the good ones in peace time.

The cavalry officer must remember above all that he has comparatively only a short time in which to teach the mass of things that each cavalry trooper must learn. The officer should study the fine points of teaching the elements of the military game and its essentials. He must learn to separate the essential from the non-essential, he must develop practical instruction in lieu of theoretical, realizing that the soldier learns more by being shown than he does by being talked at. He must take advantage of all psychological aids and learn thereby the best and most approved method of combining brain and muscle. He must learn to state facts tersely and in an interesting manner, realizing that the soldier's brain quickly tires of long-drawn-out explanations.

Above all the cavalryman must remember what it is all about. He must stick to the main issue, war and preparation for war. Von Clausewitz, who was the first to analyze and realize how completely Napoleon had smashed the old traditions, the "old fencing," the rococo methods of making war previous to his time and whose work on it is the foundation of modern military thought says, apropos of sticking to the main issue, "Every activity in warfare therefore necessarily relates to combat, either directly or indirectly. The soldier is levied, clothed, armed, exercised, he sleeps, eats drinks and marches, all merely to fight at the right time and place." [1]

The great essential is to train soldiers for fighting. In our efforts to accomplish this let us not forget another great essential, that we must also train officers for leading.

[1] "On War," von Clausewitz, Vol. I, Book I, page 37.

CHAPTER V

TROOP TRAINING—THE HORSE

The expression "training the horse" that we hear so often in the cavalry, should be amplified to make the expression "training the horse for war." Anything extending beyond that necessity should be taken from the sphere of work, of drill schedules and from training proper. The training that extends beyond direct necessity should be placed where it belongs, amongst pleasures and sports. The difference should be sharply defined.

There are so many opinions and differences of opinion on the subject of horse training that it is wise to narrow the field of discussion to simply the training of the horse for war. This does not tend to disregard the immense value of the horse as an instrument of pleasure or the direct value of mounted pursuits and sports generally. The question is now: what is the standard of training that we require for the horse to fit him for his place in campaign?

He must be hard and fit to carry his rider and the weight of the pack for long distances upon successive days. He must be able to pick his way across country at speed. He must be able to pass obstacles of not too great a height or width. He must be handy enough for his rider to use his weapons mounted. He must be docile

and trained so as to not hinder his rider's mounting and dismounting.

The next point is to decide as to what degree of training is necessary in order to enable him to reach this standard. It is only a matter of taking the methods we now have and cutting the amount to what is necessary for the purpose in view, arranging for this amount of training and testing the horses after they have been trained. Let hours be spent outside of working time, encourage every man and officer to work on his horse and make horsemanship a pleasure, but keep in view the fact that we are working for war and let us differentiate between pleasure and business. In our working hours let us prepare for war; in our rest and recreation periods, encourage everything that will indirectly help us in preparation for war. Modern warfare has become too scientific a game, we have too many things to teach the soldier in working hours to allow any more than the proper amount of time necessary on each subject.

A great aid to attaining the necessary degree of training would be the stimulation of the soldier's interest in his horse. He is driven now by unimaginative methods in training and long hours of drill spent in acquiring unnecessary things, to look upon his horse as only an additional source of labor. Means must be adopted to make the condition of a man's horse a source of punishment or commendation if he fails or succeeds in handling it properly on the daily routine. He should be made to feel that he is just as responsible for the condition of his horse as he is of his gun. In many organizations there is a feeling of divided responsibility in this respect.

The soldier is detailed to some fatigue duty, he is absent from stables for some cause: does he worry about

his horse? He does not, he knows that someone will look after it. The responsibility for the care of the mount rests upon the stable sergeant, the first sergeant, the platoon commander or some one else, it does not rest on the soldier. This condition is unsafe in that it leads to a general lack of care for the horses on the march and in campaign, and the organization in which it is most prevalent is the organization that will turn up with the smallest strength in effectives after a few weeks of campaigning.

The solution of the problem is to assign a man a horse, the animal to be his as long as he cares for it properly. Make him groom it every day no matter what duty he is upon. If he cannot get to stables at stable time let him come later and groom under the supervision of the stable sergeant, or for the inspection of the stable sergeant. This may seem to defeat the object of interesting a man in his horse by increasing the amount of his drudgery. It can be lessened by lessening the amount of time he is required to attend duties that take him from stables. Moreover, every man absent from stables means that some other man has to groom an extra horse which is a daily task that does not increase the man's interest in him. Make it a fixed rule that every man is to groom his own horse every day; then the few extra horses that are left because of a man absent sick or for some other unavoidable cause can be groomed by detailing several men upon them, which would make the labor almost negligible.

Allow the trooper more individual work with his mount and cut down the amount of mechanical riding around in a circle to a minimum. Let him compete for some prizes in the troop, squadron or regiment for the condition and training of his mount. A great deal of instruction will be absorbed by the man under such

a method and he will be a better cavalry soldier for it.

He will be more prone to give heed to the teachings of his instructors when they advise him as to the care of the horse when alone, how to watch for every chance to rest it, to examine its bits and saddling at every opportunity, to give it every chance to nibble a mouthful of grass or to drink whenever opportunity offers. He will be more prone to ease the horse over rough going, to dismount when making a steep ascent and to watch his back and legs and report the condition of his shoeing, if he is fond of his mount and desirous of keeping him. The sum total of these minor things, their observance or neglect make the difference between an organization that remains at all time close to full strength and one that is depleted below its effective power after a few weeks of campaigning.

When training the trooper, stress should be put upon campaign riding and the individual's care of the horse. He should constantly be warned of all the little things that save or break a horse on the march. He should be taught more individual care of his horse and a little less of the refinements of riding than he now receives. It must be remembered that the individual soldier will be very often detached in the cavalry service and that upon the extent of his knowledge of the care of the horse will depend the accomplishment of his mission. We see many excellent organizations, with horses in good condition, smoothly gaited and well handled while under the eye of the officer. But let almost any of his men get away from his watchful eye and every principle is violated. Very often non-commissioned officers cannot be trusted even to march a unit smoothly at the trot when ordered to

move out on their own. How many times do you see a troop that has come to the drill field smoothly under the command of the officer sent back under a non-commissioned officer and return like a mob! They are not trained in gaiting and are not trained in a great many other things that have to do with the efficiency of the horse.

It is a lesson sometimes to compare two troops in the regiment, perhaps both in the same line and adjacent. In one troop about half the horses are restless, are fidgeting, stamping and shifting their position with heads tossing and tails switching. Another troop seems to be standing tranquilly and easily. Inspect the first troop closely. You find curb chains too tight, throat latches cinched up like girths, equipment pressing against the horse uncomfortably, bits too low or too high in the horse's mouth, in other words a multitude of little things wrong. It is the lack of attention to little things that means lost horseflesh. The men of one organization are properly trained and their troop's commander has an eye for every detail wrong; in the other the men do not know and have no method of finding out as their troop commander does not know.

These things occur in time of peace in the post where a horse's work is not exhausting, where he is fed and watered regularly, where he is inspected by competent people on his return to stable, and immediately given attention if he needs it. How much more will their cumulative effect be under campaign conditions where these attentions are not possible? How much, for instance, does a soldier know about feeding and watering a horse and how to care for him when away from the solicitude and system of the stable sergeant? "Just as in any business the profits are effected by small and seemingly petty

economies, so in a regiment it is the small economies of horse flesh which mount up to a great sum in a month or so of campaigning." [1]

The great cause of losses of horse flesh on campaign is that so much of the cavalry work is necessarily dispersed; the trooper is on his responsibility to a great extent. If he has gained no idea of the limitations and needs of his horse in peace he is certain to be an expensive liability in war. He ordinarily has simply ridden his horse to and from drill, at drill and at equitation or perhaps on a carefully conducted march or two. He has never been faced with a mission in which there was any danger of overriding his mount or failing to find care for him when he arrives at his destination. As a consequence the moment he finds himself in such a situation he begins automatically to wear his horse down to the breaking point.

Campaign principles of horse management must be instilled into the soldier. It is one of the most important parts of his instruction. The officers and non-commissioned officers must preach and reiterate these principles until they become part of his nature. He must be made into an enthusiastic horseman who develops enough affection for his mount to be willing and anxious to take every care of it.

Every subordinate leader must be trained constantly to observe the horses under his care. The best way of accomplishing this is to hold every one responsible for the horses of his unit, the sergeants for their sections and the lieutenants for their platoons. Once a forceful commanding officer of an organization severely corrects an individual or two who is not rendering a good account

[1] "Our Cavalry," Rimington, page 204.

of his stewardship and commends those who are, the idea will begin to become part and parcel of the outfit.

Men and officers must be warned against carrying unauthorized articles which add to the weight of the horse's load on the march. The use of the horse as an easy chair must be treated as a crime. An English observer tells of seeing in 1914 an entire brigade of French cuirassiers, both men and horses tired after arduous work, which remained at a halt for over one hour, every man in the brigade lounging in the saddle throughout the whole time. The memoirs of French cavalry officers tell of the many nights that the saddles and packs were left on the horses while the men slept holding the reins. The French cavalry was nearly ruined as a tactical force by the lack of knowledge of horse care on the march and campaign upon the part of officers and men. The British were enabled to do more brilliant and important work with smaller forces because of the knowledge they displayed in the care of the horses. They learned their lesson in the South African War where the lesson cost them about twenty-two million pounds sterling and untold lives and time.

The officers and non-commissioned officers must set an example of solicitude for the horses. The trooper must be taught the habit of looking to his horse the moment he puts feet to ground and before he rolls the cigarette or starts chaffing with his neighbor. The need for all this care of minor details must be explained to him so as to ensure that he will carry it out intelligently when he is out from under the eye of his superiors. He must be taught the principles of horse feeding, that a horse's stomach is small and requires several feeds. The dog is a carnivorous animal, his food is highly concentrated. He

can gorge once in twenty-four hours and keep well and fit. The horse is a grazing animal. His nourishment has to be absorbed from a great deal of bulk.

The horse cannot tell of his discomfort or his pains. It needs a watchful eye on the part of his rider or the officers and non-commissioned officers. The experienced horsemaster can very often tell from the expression of an animal whether or not all is well with him.

An ounce of prevention is better than a pound of cure for more reasons than one in regard to the care of horses. But if even the ounce of prevention fails and a horse does receive some minor injury or fall heir to some minor ailment the better part is to take him immediately from ranks and try to have him cured. The remount service in the Palestine campaign, where they had it very well organized, was responsible for turning back and saving great numbers of horses. It is better to save a trained animal and return him to duty than to break him down for good and then be forced to replace him with a poorly conditioned remount, if it is possible to replace him at all. We will require a well organized system of mobile veterinary columns to prevent any wastage of horseflesh. The study of this phase of the cavalry problem alone should lead to some excellent results.

Nansouty said to Murat after the latter had crossed the Niemen in Napoleon's Russian campaign and had only 18,000 horses left out of the 43,000 that he had started with two months previously, "The horses of the cuirassiers, not, unfortunately, being able to sustain themselves on their patriotism, fell down by the road and died."

There is always a large amount of wastage in horseflesh in campaign. Most of it is preventable by measures taken in peace time. Of these measures the most effec-

tive is a high degree of knowledge upon the part of the officers and men as to the care of horses. This training can be had in peace time if due attention is paid to the education of the individual. One of the best means of making this education "stick" is to cultivate a high degree of personal responsibility and liking for his mount in each individual soldier of cavalry.

CHAPTER VI

AUXILIARIES WITH CAVALRY

Cavalry is itself a combatant branch. It must on occasion fight with or against infantry, artillery and machine guns in the same manner as infantry. To enable it to do this effectually it is necessary that cavalry be furnished with the same aids that are furnished the infantry. It will have the same opponents as infantry. These will be machine guns, barb wire, tanks, armored cars, artillery and aeroplanes. The infantry division will contain neutralizing agents for all of these. The cavalry division must contain no less.

After all is said most of these innovations tend to neutralize each other as time goes on. Battle is decided by men. But an enemy strength in certain auxiliaries that is not met by an equal strength on our own side puts our men at a disadvantage. Our cavalry must not be impeded in its main rôle—which is to fight. The cavalry division must be enabled to carry out its basic combat duty, the ability to hurl a mass of men on to the battle field. It must have all deterrent mechanical factors on the enemy's side neutralized by corresponding or superior factors on our own side.

Field Marshal Allenby in his message to the American Cavalry in the January number of the *Cavalry Journal* says "Armed with weapons of precision, rifle and ma-

chine guns, in addition to its old time equipment of sword and lance and supported by mobile quick-firing artillery, cavalry can adapt itself to any conditions . . . Cavalry enterprise is aided, too, by mechanical means of transport, lorries, tanks, armored cars assuring supply, while fighting cars and swiftly moving tanks can work in cooperation with cavalry and horse artillery over any ground. The machine guns and automatic rifles, now forming part of the armament of our cavalry, give of themselves great independence of action. By adopting every helpful device, the mounted arm can continually improve its fighting power."

The main need of our cavalry is a higher degree of cooperation with horse artillery. Next in importance is the need for closer cooperation and communication with the air forces. Next in order would be the necessity for tanks, armored cars, motor cycles, increased signal communications and caterpillar tractors. With these auxiliaries cavalry need not be content with simply fighting against cavalry. It is a worthy antagonist for any branch or combination of branches. The ability to fight, and to fight under any and all conditions is the ideal for which to strive in our service.

A cry that will be raised by some will be one pointing out a fancied loss of mobility. Horse artillery does not detract from the mobility of cavalry. There are few places where the horsed guns cannot go. Places where they are unable to go will in most cases resolve themselves into places where they are not needed any way. The rapid development of the whippet tank idea should give us a light and speedy cross-country tank that can follow cavalry anywhere. The armored car question is simply a question of motor transportation. It is hoped

that the caterpillar truck will develop into a dependable factor in our supply problem, especially in waste country. The cooperation of all these auxiliaries will be available for the cavalry in all conditions and they will not detract from cavalry mobility. Cooperation entails unity of action, and unity of action entails similarity of movement. In this case similarity of movement resolves itself into capabilities for like speed. Nothing is added to the cavalry division that will detract in the slightest from its marching speed. On the other hand it will possess added units of greater speed under certain conditions. While speed is not all of cavalry mobility, the problem is now to work out types of mechanical traction that will cover all classes of country. This problem seems to be fairly on the road to solution. The final result will be speedy machine-gun and field-gun-bearing types of light tanks and caterpillar trucks that can accompany cavalry anywhere and that will add immeasurably to its radius of action and to its offensive power.

The need, now, is to study the points of cooperation and fullest utilization of the good qualities of these auxiliaries. This study is only possible with the assignment of these units to cavalry, preferably to the cavalry division. A tactical policy to govern their use could soon be formulated under these conditions. Some few points in relation to each which have been developed during the last war are noted here.

Horse Artillery and Cavalry:

One of the heritages of the old two-company post days in our Army is the lack of opportunity that is found to learn cooperation with other branches in peace time.

What Rimington calls "The watertight compartment" attitude has obtained to a great extent. Our greatest loss in this respect is the lack of opportunity we have had in the cavalry to learn the fine points of cooperation with horse artillery.

This cooperation requires a high degree of knowledge and understanding of each other's problems upon both sides.[1] It requires a carefully worked-out system of tactics designed to develop the best points of each branch in combination. To develop to the highest degree the attack possibilities of cavalry we must have close cooperation with horse artillery. One of the infantry principles has resolved itself into making no attack without the support of artillery. This necessity is, if anything, greater in the cavalry.

From the policy of determining standard principles of procedure or methods of action, a cavalry tactical principle, in other words, that will insure team work and intelligent initiative, flows the necessity of carrying out this policy in respect of cooperation with other branches. A definite policy must be laid down and followed in training so that in war time there will be no necessity for complicated orders to cover each case. This applies both to cooperation with, and action against, different branches.

Cavalry accompanied by modern horse artillery and machine guns and highly trained in fire power, as well as in cooperation with its auxiliary arms, will be the offensive force of the future in wars of movement. But we cannot secure the high degree of cooperation necessary in war unless we practice it in peace time. Langlois' "Lessons from Two Recent Wars," referring to the

[1] Langlois, "Lessons from Two Recent Wars," page 140, quoted in "Our Cavalry," Rimington.

British and Boer War says: "The English took no steps in peace to correct and strengthen any union between the arms, and evil overtook them. I cannot insist too much on this point, and we (the French) must profit by this lesson."

Our cavalry and horse artillery must be quartered within working distance of each other. If this is not feasible we should hold a sufficient number of combined problems per year properly to instruct our officers. A variety of problems could be worked out, teaching not only this phase of combat work, but teaching many other important things; cavalry staff work and the service of intelligence, amongst many.

The German Cavalry Drill Regulations state: "The Horse Artillery will often, by its fire, cause the foe to disclose his strength and thus help reconnaissance. In union with Maxim's it enables the opposition of the enemy in occupied positions and defiles to be overcome, and thus spares the Cavalry the dismounted attack."

"Horse artillery and machine guns enable the Cavalry to hem in at long range the enemy's marching column to cause them to partially deploy; through flank fire to change the direction of their march."

Horse artillery drives the enemy out of positions and therefore permits the cavalry commander to utilize the most precious quality of his branch, its mobility.

The Germans learned their lesson in 1870 when there was no trace of cooperation between their artillery and cavalry. It was held that cavalry in battle had no need of artillery. In 1907 the view point was completely changed and horse artillery and machine guns ordered to remain with the cavalry throughout the course of the engagement. It is a question as to whether some of the

great failures in mounted action in 1870 would not have been overwhelming successful had they been properly prepared for by the action of artillery and supported by that arm.

The English learned the lesson of cooperation of horse artillery and cavalry in their Boer War. They applied this lesson brilliantly in the World War.

The whole question of artillery cooperation with cavalry is one phase of the great cavalry need, the augmentation of fire power.

In the mounted attack alone there are great possibilities with the proper support of artillery. The Palestine campaign proved conclusively that thin lines of rapidly moving horsemen, properly supported by fire action, could cross in a few seconds and with small loss, ground that the infantry could cross only in a vastly longer time and with heavy loss.

Our colonels and brigadiers must have an opportunity to learn the fullest capabilities of the combination of fire and shock which reaches almost its highest culmination in the mounted attack supported by artillery. To learn to handle this, horse artillery must be available and in reach for combined training.

For the cavalry to ever amount to anything in our service, we must look beyond the platoon and troop and think in terms of regiments, brigades and divisions. The Europeans considered it necessary to have horse artillery assigned to the cavalry brigade and to have the brigadier trained in combining the action of the two. As one of our regiments is about equal to a European brigade, it may be necessary to have horse artillery assigned to detached regiments. In any action against European or Asiatic cavalry we would be the sufferers, if we do not

strengthen our fire power with horse artillery. Criticize European cavalry as we like, we are no less than foolish if we do not follow their lead when they outstrip us in any particular. The particular in which they outstrip us now is in learning to combine cavalry action with the action of other arms. German, French and English cavalries carried it out in the war to a much greater extent than we have ever done, even in the Civil War. We must modernize ourselves in this particular.

There are several factors that must be considered in the close cooperation of horse artillery and cavalry. The mobility of the two is almost equal. The equipment of horse artillery may have to be slightly modified, owing to the fact that horse artillery batteries will, from the nature of cavalry work, act less in battalion units and function more as individual batteries. Officers of each branch must be educated in the possibilities of the other branch. This could best be done by requiring them to serve for a short course of training attached to the other branch.

Cavalry tactical movements must take into consideration the needs of horse artillery; i. e., in mounted action they must be careful to avoid masking the fire of their batteries, they must aim at keeping the artillery informed at all times, signal communications must be amplified for better liaison with the batteries, and artillery commanders must be trained sufficiently in cavalry tactics to enable them to act with good judgment in the absence of instructions.

In working against mounted enemy forces supported by horse artillery, the cavalry commander must maneuver to the end of always making the enemy mask his batteries and making his own cavalry unmask the fire of his

supporting batteries. He must maneuver to lead or drive the enemy cavalry under his own artillery fire, or move to have them enfiladed. He must make all mounted attacks with the object of permitting his batteries to continue their fire until the last second.

One of the great objects in the attack would be to give our own guns the best target possible as long as possible. In preparation for a mounted action the horse artillery commander must receive his orders first. Then an attempt should be made to combine the shock and fire action so that one should not nullify the other; in other words, make the artillery line of fire and the line of the cavalry attack at an angle sufficiently great to insure that one does not interfere with the other. The highest degree of concealment must be striven for.

It is essential that the artillery be kept from observation, both from the ground and from the air. This consideration must not weigh as heavily on the horse artillery as upon other types. It will very often be necessary for horse artillery, in order to add a decisive note, to move very much farther forward and well up with its cavalry than would be the case when operating in conjunction with infantry. This would apply especially to the rear guard action and the pursuit.

The escort for the guns must not be allowed to be tied down and immobilized, but must be free to act, mounted or dismounted, must not be so near the guns as to be recipients of "overs" or "shorts" from opposing artillery, and must have a high degree of initiative. They must provide security by reconnaissance and not simply wait until something hits them.

The cavalry command must never allow its rôle to degenerate into that of a simple escort for the guns. It

must be kept in mind that the guns, while a very important auxiliary, are still an auxiliary.

The artillery commander must seek important targets. When supporting the attack and after the period when his fire endangers his own cavalry, he must switch his fire to the enemy's supports, or to his led horses. He must be ready to drop his shells on any means of egress liable to be taken by the retreating enemy. He can contribute materially to the course of the action by seeking out and locating new targets and pointing them out by bursts of fire to the cavalry commander; i. e., the unexpected appearance of reserves or reinforcements, enemy artillery, etc. He can herald any new movements of the enemy by this means and greatly assist the cavalry commander.

The artillery commander must have full confidence in his supporting cavalry and must know that they will make every effort to save his guns if need arises. Nearly every modern war has in it many incidents such as Grenfell's heroic rescue of the guns with the 9th Lancers in 1914. Cavalry officers must remember that cavalry is very often called upon to save the guns of their own side and to capture the enemy guns.

Armored Cars:

The question of armored car cooperation with cavalry is one well worth our study. The armored car is especially valuable in advance or rear guard work. An example of close cooperation is given in the Palestine campaign, noted elsewhere in this volume. The operations of armored cars with the 5th Cavalry Division in Palestine October 7th to 26th, give much food for thought. In

these operations valuable work was done by the armored cars as reconnoitering agents. In country with fair roads they can be exceedingly valuable and result in the saving of much horse flesh. They would also be valuable in partisan warfare, operating against irregular or guerrilla troops. In the action with the 5th Division in Palestine, there were examples of armored car reconnaissance, of combats between opposing armored cars, and combats of armored cars with cavalry.

A type of armored car that could also be used for the carriage of anti-aircraft guns would be exceedingly valuable to the cavalry. Cavalry is vulnerable to attacks from the air, both bombing and machine gun fire. It is vulnerable when in mass or marching on the roads, and its picket lines and camps are especially good targets. It was found necessary in the Palestine campaign to guard the picket lines against aerial attacks. There must always be some form of reserve defense in the event of the defeat or temporary absence of our own air forces.

The armored car should have a turret, equipped with a machine gun or light field gun. The field gun should be large enough to engage hostile armored cars and therefore should have sufficient muzzle velocity. It might be advisable to have a proportion of anti-tank guns, with armor-piercing projectiles.

A suggested French organization for an armored car unit is to have a battalion divided into three companies, with one extra light-section for supply and repairs. The company would contain four sections and one echelon. The section would comprise three cars, two machine gun cars and one light cannon car. The combat unit would be the section. These are never to be placed on duty with units less than the French squadron. They must be

placed under the orders of the commanding officer of the cavalry which they are to support.

The usual formation is with two machine gun cars on the flanks of the light cannon car, which carries the section commander. The French recommend that a car company be assigned to the brigade and a battalion to the cavalry division. The battalion commander would be under direct orders of the divisional commander.

The tactical use of the armored car must be governed by the fact that it is a delicate instrument. It is above all essential to avoid wearing it out for feeble results. It should not be used on minor reconnaissance duty or in general such duties as would place it at the disposition of units of cavalry smaller than a French squadron.

Motor Cycles:

A substantial aid to cavalry would be the attachment of numbers of motor cycles. They would result in a saving of horse flesh in campaign. They could be used to considerable advantage in the service of reconnaissance and would wonderfully speed up the service of communication. French, Belgian and German cavalry authorities seem to concur in the value of cyclist troops, as accompanying troops for cavalry. There are possibilities in the development of motor cycle troops for the same purpose. It is not known whether this possibility has ever been tested in our army.

Signals:

A portable wireless set that could be carried on four Ford cars, with all equipment and personnel, including

two days' rations and water, was used very successfully in the Palestine campaign. Its range was twenty-five to thirty miles. It can be carried either as a pack or a wagon set. Corps headquarters used a larger set, with a radius of about eighty miles. Each division in Palestine carried two of the first sets, so as to enable the station to be kept open behind while the division was moving to the new station in front.

The signal forces with cavalry should be easily subdivisible, so as to permit the detachment of sufficient strength with even smaller units than the regiment. It might be advisable in our cavalry to be able to send light wireless sets with our squadrons and heavier sets, with greater sending radius, for the brigades and divisions.

In Palestine many other means of secondary communication were used, and gave varying results. The heliograph was used as secondary communication; experiments were even made in heliographing by moonlight. The buzzer gave the best results as a rule, but sometimes broke down. In addition to all these, lamps, flags, motor cyclists, gallopers or mounted officers, mounted soldiers, and pigeons were used when circumstances demanded.

In the use of wireless in campaign, the mistake made by the Germans in their advance in 1914, of sending uncoded messages, should not be repeated. In this advance von Kluck complained that the wireless was listened in upon by the enemy, and many plans disclosed thereby.

Tanks:

It is not definitely known yet what stage of development can be reached in tank construction and improvement. The tank is essentially an infantry weapon at its

present stage of development. There seems to be strong reason for believing that the English have developed a type of light whippet tank that may fulfill cavalry requirements. This tank is stated to have a speed of twenty miles an hour across country, a cruising radius of some two hundred miles, and to be so delicately balanced that it can be run over a brick on the roadway without crushing it. A great fault of the tank has been its effect upon road surfaces. Its chief drawback is its vulnerability to direct artillery hits. There seems to be only one example of a combat between tanks on the Western Front. In this combat the results were indecisive.

The tank is chiefly useful against machine gun nests and wire. It may be found necessary in any future war to attach enough of the whippet type of tank mentioned above to the cavalry to overcome the above antagonists.

Anti-Aircraft Guns:

It will undoubtedly be necessary in the next war of any magnitude to provide anti-aircraft protection for the cavalry. The size of the cavalry masses, both upon the march and in camp (when their picket lines afford a tempting target) will make them very liable to attack from aerial machine-gunning or bombing. This contingency should be guarded against by the assignment of anti-aircraft guns to the cavalry division to provide security. The possibility of the defeat of our own air force and the consequent loss of its protective power, must always be held in mind.

CHAPTER VII

CAVALRY TACTICS—MOUNTED ACTION

To decry the mounted offensive abilities of cavalry because of modern weapons, is to show a poor grasp of one of the underlying principles of war—the value of the offensive. It is also indicative of a lack of study of the lessons of the most recent war at least, not to mention past wars in modern times.

The American cavalry officer must not be a faddist—enthusiastic about this weapon or that, to the exclusion of other weapons—he must not be an exponent of one form of action to the exclusion of others. To adopt this narrow attitude of mind is wilfully to disregard the powers and capabilities of his own branch and to limit himself to a circumscribed course of action. He must be prepared to use any and all forms of action and weapons when the opportunity presents itself for each special type.

To enable himself to do this with not only good but exceedingly rapid judgment he should, by study, experiment and reflection have formulated for himself a working code ready for instantaneous use in time of emergency. This code should be a set of working rules, each rule containing the elementary principles as to the use of each form of attack, each weapon and combined forms of attack and weapons.

He must not be a bigoted enthusiast concerning the use of cavalry mounted but, on the other hand must assign it its proper place in the tactical scheme of things. The mounted attack, while not, as formerly, the sum and end of all cavalry work, is still an important thing, both from its moral and from its physical effects.

The moral effects are of two kinds—the influence upon the spirit of the cavalry that is anxious to close with the enemy, and the effect upon the enemy. Its great value to us is the offensive spirit that it inculcates. This is of such importance as to make it highly probable that, if given two opposing cavalry forces—all other factors being equal—the side that enthusiastically sought the decision with the sword, whenever opportunity offered, would very quickly rise superior in morale to the side that dropped to the ground every time the enemy came in view. Continued insistence upon fire action to the exclusion of ought else will inevitably blunt the offensive spirit of any cavalry. Cavalry fire action as opposed to cavalry shock is an illustration of the defensive attitude as compared to the offensive spirit.

The old fallacy—upon which so many discouraging decisions were formerly made at our field exercises—that every time a rifle is fired somebody drops—has been pretty well exploded. Some one has computed the amount of metal it takes to kill or wound an individual in modern war at well over a ton.

General Parker [1] has compared the vulnerability of the target offered by the dismounted man advancing 500 yards to that of the target offered by a mounted man and his horse advancing the same distance. A mounted man presents little more than twice the target, head on, offered

[1] "The Mounted Rifleman," Brig.-Gen. Parker.

by the dismounted man. A dismounted man advancing by rushes presents a full target for 3 minutes and a prone target for 10 minutes. The mounted man covers the same ground in 1 minute. It is figured out roughly that the mounted man and his mount are exposed to about one half the fire that the dismounted man receives.

Add to this the moral effect of a line of horses, surmounted by a crest of gleaming steel, swiftly and irresistibly advancing; the effect upon the defending rifleman and his nerves is bound to be destructive to markmanship when you add to this the difficulty of hitting a moving target and the fact that both man and horse will continue to advance unless absolutely vitally hit, thus giving the effect of invulnerability—the total gives a whole lot to the efficiency of the mounted attack.

As to the difficulty of hitting a rapidly advancing target an incident is cited by Rimington that occurred in the South African War. A group of picked shots had been left by a British cavalry outfit to fire at long range upon a small force of Boers moving along their front at extreme range. The officer in charge, who was also firing, suddenly noticed that the Boers had changed direction and that about seventy of them were galloping rapidly towards his party. He gave orders to continue firing until the last possible second. He himself picked out one Boer, slightly in advance, mounted upon a white horse. He fired an entire clip at this man, firing steadily. When the attacking horsemen came dangerously closer he mounted his party and rejoined his unit at speed. When last seen the Boer on the white horse was still in the lead. When opportunity offered he compared notes with the men of his party. It seems that they had all picked the

same target at whom they had collectively discharged about forty rounds.

The lessons of the Palestine campaign should teach us that first, there are occasions when mounted attack against rifle and machine gun fire is not only possible but highly preferable; secondly, that cavalry, like infantry, is entitled to support in its attack and should be supported by the fire of rifles, machine guns or artillery to secure the best effects.

The cavalry that dismounts in face of hostile cavalry, unless it has hopes of ambushing or surprising the same, is on the defensive. It has been proved upon numerous occasions—and by many famous generals—notably Gustavus Adolphus, Charles XII of Sweden, Turenne, Condé, Frederick the Great and others—that the cavalry which dismounts in the face of opposing cavalry or receives it at a halt with mounted fire will be caught and ridden down. To argue that the rate of fire was slow in the days of these leaders is to forget that the trained infantry and cavalry of those days had in many cases, due to their formation in many ranks, a rate of fire at shorter range that closely approximates the fire rate of today.

It has been proved upon many occasions that mounted infantry cannot last in the field against cavalry. Sooner or later they will be caught in the saddle and then they are finished. In the Shenandoah Valley in 1864 the Southerners, though admirable horsemen, were armed only with the rifle and were defeated by the Federals under Sheridan, who were trained in both fire and shock.

The true ideal for our cavalry is the ideal of combined action, the use of fire and shock, artillery and machine

guns well up and used with a high degree of cooperation and intelligence, a high state of training in rifle and automatic fire in the ranks and a thorough confidence in the thrusting sword. We must be balanced cavalrymen, quick to seize the advantage of every weapon and style of combat that will enhance our physical and moral superiority and lower that of the enemy.

The question of pistol or sabre in the mounted attack is argued at great length in our service. It is the modern American shape of the old controversy, as old as the history of cavalry, the question of ballistics from the horse's back, a question that has been rising periodically for centuries since the time of the Parthian horse bowman.

The rise of the Zulu dynasty, and its stubborn fight against the might of the British Empire can be traced to one fact, that the Zulu dynasty forbade its warriors to throw their assegai and forced them to close and use them as stabbing weapons. Whoever issued that dictum understood the morale that accrues to the side which insists upon closing with the enemy in shock.

The pistol is a valuable weapon, a typically American weapon. It is our heritage; every youngster who has read a dime novel is imbued with the romance and the love of the pistol. Insofar it is valuable. It is a weapon in which a man has confidence, a begetter of morale, a steadier of courage. The lone mounted scout, picking his way over perilous terrain, is twice the man for having the pistol strapped to his hip and twenty-one rounds of ammunition ready to hand in convenient clips. The patrol is twice as bold for having the pistol and being able to use it. Its value and the appreciation in which the average American holds it can be seen from the fact that every "doughboy" in France that could beg, bor-

row, steal or pick one up from the field had a pistol attached to him. That these exerted an enormous effect upon the American morale as a whole there can be no gainsaying.

As a cavalry weapon for the shock, for the gaining of ascendancy over the enemy cavalry, for use in mass it is not the ideal weapon. The ideal weapon is the cold steel, the long sharp sword whose gleam can cast terror into the enemy and whose weight and length provide an objective upon which the cavalryman can concentrate the whole of his energy and lust of slaughter as the infantryman does on his bayonet. It is the concrete expression of the desire for contact, the desire to close and smash with the enemy. This desire must find expression if our cavalry is to remain superior to its antagonists. To keep the cavalry spirit we must keep the sword. It is our concrete expression of the will for the offensive. And without the offensive spirit cavalry is as nothing.

Without the sword we become mounted infantry. In other words, we lose, for the reason that mounted infantry is not equal to good infantry and can always be beaten by good cavalry. Let us become balanced cavalrymen, not faddists, wholly prejudiced against this weapon and that, but with an all around development, capable of using each weapon and form of attack as the situation requires. Thus and thus only can we fulfil the rôle that we will be called upon to fill in the next war.

Too much improper training in the use of the sabre will lead to a lack of confidence in it on the part of the average soldier. Its instruction time should be cut to the limit consistent with practical use. An ability to point the sabre at the enemy and to ride him down should

be all that is required in training as it is all that is required in war. It is not possible to make the American cavalryman a finished swordsman and moreover it is not necessary. If he is taught that the sabre is a weapon of undoubted value, taught to handle it but not bored excessively in practice with it, and most of the instruction concentrated upon the rapid gallop straight to the front, he will have more confidence in it when the opportunity for its use occurs.

This confidence could also be increased by the substitution of a lighter, more graceful and better balanced weapon for the present atrociously ugly, ill-balanced and ungainly sword.

It must not be forgotten that three out of the five brigades of the Australian Light Horse, who had no *arme blanche,* applied for the sword before the big advance of 1918 as a result of their experience in the previous months. It is stated that the two remaining brigades made a similar request just before the signing of the armistice.

It is futile to talk of frontal attacks mounted against unshaken infantry. The experience in the world war has shown that if infantry, from one reason or another, is in such condition that success would attend a hurried, dismounted attack of the regular cavalry variety, a mounted attack will succeed and result in saving of time and lives, to an incomparably greater degree. The object of the infantry attack is to come to close quarters and cold steel. This is also the cavalry object.

One factor in favor of the mounted as against the dismounted attack is the superior morale that results from the former. There is certainly a feeling of innate superiority on the part of the man who rides on a horse

over the man who walks upon the ground. Another factor is the demoralization produced in the enemy by the combination of numbers and speed. In March, 1917, the 5th Cavalry Division (British) charged Villers Faucon and two other villages. Many Germans, posted in trenches and behind wire, put up their hands while the cavalry were still some distance off. One of them in reply to the question as to why they had done this, stated: "It would have been all right if infantry had been attacking us, but what can one do when the cavalry gallops at one!"

One of the chief arguments in favor of the sword is the value of such a weapon in the rencontre of small detachments where the side that attacks first at the greatest speed will drive off the enemy. It is claimed that the British cavalry in 1914 gained the superiority in morale over the Uhlans because they rode at the enemy on sight, who, in many cases, was caught in the act of trying to dismount to fire.

Offensive action on the part of one cavalry compels the other to corresponding activity or to the loss of its "edge" or morale. Two cavalry forces that stand off and take pot shots at each other will never have any violent contact nor will the action of either one be decisive. The moment one begins to take the initiative, or to push its opponent it will have to have recourse to the steel and the other will have to retaliate in kind or rest content with defeat.

It must be remembered that there are charges and charges. The charge against cavalry is the type that requires consideration of some factors that cannot be omitted. Very few of us consider the charge more than in one way—a quick forming of line to the front and the

development of speed. This is wrong as it will lead at the best to indecisive results. The following points must be observed: 1. The enemy must be kept ignorant until the last moment as to the point of attack. 2. The leader must retain control over his unit as long as possible. 3. He must be able to pick his angle of attack. To accomplish these, it is best to move rapidly to the flank, keeping in column as long as possible, until opposite the point selected, then form line by wheeling into line—fours right or left—and attack.

De Brack, in his excellent work on cavalry says, "When you charge make a change of front and attack them in flank. This maneuver can always be successfully practiced against an enemy like the English, who make a vigorous and disunited charge, whose horses are not very manageable, and whose men, brave but uninstructed, begin the charge too far away from the enemy."

In the training for the mounted attack, great stress must be laid upon prompt rallying. The advantage of this lies in the fact that the unit most quickly rallied is available for further concerted action, either mounted or dismounted, and can act as a new reserve. The more quickly the unit can be gotten in hand the more quickly is it available to parry a counter attack or to move against fresh bodies of the enemy.

Cromwell, who in addition to his other qualities was one of the greatest English cavalry leaders, realized the necessity of rallying speedily after the charge. He gained many successes through this faculty alone. "After Rupert's defeat Cromwell rallied well and quickly and reformed ready for the next job at hand. The pursuit of Rupert's troopers was intrusted to the smallest fraction sufficient to do the work efficiently . . . after each at-

tack he reforms quickly and in good order ready for the next effort . . . attacks the Royal infantry. . . . Towards the end of the battle he is rallied and ready to meet yet another effort; ready to meet Lucas' and Goring's squadrons."[1]

In peace time we do not carry problems to a logical conclusion. What is to happen after the charge is driven home? the cavalry or infantry ridden down? the position captured? We do not practice this phase of the attack sufficiently. In meeting these situations the rally is one of the most important means. It should be practiced constantly in peace time.

Some necessary factors in the mounted attack against cavalry are: the maintenance of cohesion at speed, not starting the charge too soon, skillful utilization of the terrain, hitting the enemy in flank, keeping out supports and reserves and rallying quickly.

The Palestine campaign proved that the cavalry charge, far from being a thing of the past, has assumed a new value. This value is gained through the proper combination of fire and shock. The speed with which mounted troops can cross a fire-swept zone is a great factor in their favor. Fire alone will not stop the mounted attack supported by fire. Impassable obstacles will stop it. In terrain free from impassable obstacles and with proper support of machine guns, artillery or dismounted fire from other portions of the command, cavalry can cross a fire-swept zone, mounted, if they move in waves, in extended order and move with speed. The moral effect of such an attack is very high. It is in close cooperation with fire power that cavalry mounted attacks reach their greatest efficiency.

[1] "Cromwell," Capt. P. A. Charrier, page 11.

Machine guns and horse artillery should be well forward and should be trained to a high degree of cooperation. The advantage of forming the charge to a flank is this—that it uncovers the fire of the artillery and machine guns. Wellington criticized the British officers in the Peninsular campaign, speaking of the[1] "trick our officers have acquired of galloping at everything; they never think of maneuvering before an enemy." It is not possible in these days to do much maneuvering before an enemy; it is possible to reason out the manner of the attack with judgment and knowledge of the ground, and to issue clear-cut orders to subordinates before the launching of a charge.

Take plenty of time for initial reconnaissance. In large bodies move forward slowly so as to give time for the patrols to send back information. The commander should ride well forward, accompanied by his subordinates, especially his machine gun or artillery commander. He should strive for the advantage of quicker deployment and correct direction of attack. He must follow the principle of keeping his troops under cover from view and fire until plans are made, and then only send them forward when this is completed.

The mounted attack against cavalry should not necessarily lead to the *mêlée* but should be an attempt to break the enemy by the impact of a solid mass. The *mêlée* is usually indecisive as it absorbs the strength of both combatants. The best example of the value of solid attacks is the action of the closely formed 13th Dragoon Regiment which in the Franco-Prussian war, at the battle of Mars-la-Tour, defeated and drove away the French Brigade Montaigu who were in disorder after having

[1] Quoted in "Our Cavalry," Rimington, page 42.

made an easy prey of the 10th German Hussars. It may be impossible to rally a unit after it has once been committed to the charge. For this reason it is essential always to keep out one or more reserves. The cavalry fight of Mars-la-Tour in 1870 was finally decided by the second line of the 16th Dragoons who threw themselves in from the rear.

In the cavalry fight mounted it should be the endeavor to secure the advantage of the outer lines—that is to attack concentrically. As this forces the enemy to retreat concentrically, his lines of retreat cross each other. The second advantage is that in case of a repulse the retirement can be made eccentrically and the enemy's pursuit dissolves against a multiplicity of objectives.

Against dismounted cavalry always endeavor to attack the led horses by a detachment of a part of the command. Artillery should be attacked like infantry—in successive waves.

When in face of a hostile cavalry of any degree of activity, mounted combat will be frequent. This will be especially against small detachments of the enemy. If the enemy shows superior force endeavor to lead him under the fire of machine guns or dismounted portions of the command.

Every attack made on horseback is a case of risking all to gain all. It will mean a certain amount of risk. Whoever avoids it will always have an excuse. With a desire for mounted attack comes also the desire for the offensive—and it is the offensive that wins.

It is not believed that mounted charges in units larger than the regiment (American) will occur in the future. The large massed charges of the Napoleonic days are things of the past as they provide too great a target for

hostile artillery and machine guns. In units from the regiment down, the charge should, and will be, a thing of frequent occurrence. The idea of the charge should always be kept in mind to preserve the essential boldness and offensive spirit of cavalry.

Attacks against artillery should be sought for. There are many of these which will have a strong probability of success. Some of these are surprise attacks against the flanks and rear of firing batteries, attacks against batteries on the march and against artillery unsupported by infantry. Ammunition columns can be attacked successfully. It may be of the greatest importance, on some occasions, to silence a battery, or to divert its fire if only for a few moments. Surprise is the essential in this as in all charges.

Mounted action implies the offensive which implies taking the initiative. The taking of the initiative is in itself a powerful aid to the raising of the morale of one's own side and the lowering of the enemy's. It is human nature to feel instinctively that there is a good and well founded reason for the courage of the aggressive person. He must have a foundation for his belief in his invulnerability and in his power to damage, or so instinct leads one to reason. This instinct leads opponents to surrender their initiative in cases where there is very slight physical justification for it.

We have many combinations of weapons and forms of the mounted attack. We have the choice of the pistol and the sword—or a combination of the two. We have the choice of attacking in a solid line, in a succession of solid lines, in waves of foragers, and combined mounted and dismounted action. Each has its value. The main thing is to realize that our offensive spirit in the cavalry

must always find outlet and be fostered in, and by, the horse, as an ally, in our attack.

The pistol and the sabre, must not be compared and one or the other discarded. They are both necessary each in its place and for its special situation. The pistol is a deadly weapon properly handled. More instruction must be had in its use. It undoubtedly kills more of the enemy than the sabre. In comparing the killing qualities one must remember the old proverb which says that battles are not won by the numbers of people killed but by the numbers of people frightened.

There are many examples of mounted charges against infantry in the World War. One decisive charge was that of the Bavarian Uhlan Brigade, near Lagarde, on the 11th of August, 1914, against a battalion of French infantry. The infantry was over-ridden and was forced into the line of fire of a battery which caused them many losses. Another example of a successful German charge was that on the 26th of September, 1914, when three squadrons of the 3rd Guard Uhlans charged successfully against two companies of French infantry. This infantry was driven into Le Mesnil. Here it was caught under the fire of the 1st Guard Uhlans, who were dismounted. The French Infantry was forced to retreat to Rocquigny, with a loss of forty-five dead and a great number of prisoners. On the 25th of August, 1914, the German 1st Life Hussars charged against a French infantry battalion, taking four hundred prisoners and four machine guns.

One of the most brilliant charges against dismounted troops occurred in Palestine on September 30th, when the 4th and 12th regiments of the Australian Light Horse, after bombarding the Kaukab line held by 2,500 rifles and numerous machine guns, charged; the 4th regiment

making the frontal charge, while the 12th regiment charged on the left flank. The charge was entirely successful. Seventy-two prisoners and twelve machine guns were captured immediately, while most of the defenders were ridden down in the pursuit.

Another brilliant charge was that against a retreating column in the same campaign, on the 2nd of October. The 3rd Australian Light Horse Brigade pursued the enemy, who was escaping near Damascus. The brigade, after riding hard for six miles, charged the retreating column before guns could be unlimbered or machine guns brought into action. They captured 1,500 prisoners, including a divisional commander, and three guns and 26 machine guns.

The capture of the town of Beersheba by the 4th Australian Light Horse Brigade was an excellent example of cavalry offensive power. On October 31st this brigade made a surprise attack on Beersheba. Alternate lines dismounted during the course of the charge and cleaned up trenches, while other lines galloped through into the town, capturing this strong Turkish position, with 1,148 prisoners. This attack rolled up the Turkish left flank.

A charge by ten troops of the Warwick and Worcester Yeomanry succeeded in facilitating the march of the 60th Division on November 8th, in Palestine. This charge was against a strong position. It was completely successful. In addition to the prisoners, 11 field guns and 4 machine guns were captured. This was an excellent example of offensive advance guard work.

On November 13th the Royal Bucks Hussars and Dorset Yeomanry charged the El Mughar Ridge from the Wadi Jamus. This cavalry force rode 4,500 yards across an open plain, devoid of cover, and subjected through-

out to a heavy shell, machine gun, and rifle fire. The whole hostile position was captured and consolidated, resulting in the capture of 1,096 prisoners, two field guns and fourteen machine guns.

Another example of good advance guard work by cavalry was the charge on November 8th at Huj by Worcester and Warwick Yeomanry, on a Turkish rear guard. This resulted in the capture of 12 field guns and the breaking of the Turkish resistance.

On September 22nd a cavalry charge by the 18th Lancers (13th Brigade) succeeded in repelling a Turkish attack against Nazareth. The attack was made by about 700 Turks. After a short fight the Lancers charged, repulsing the attack and capturing 311 prisoners and 4 machine guns.

Another example of the charge in conjunction with the advance guard was that that occurred in the pursuit which had reached the Plain of Esdraelon. As the advance guard of the 4th Cavalry Division debouched from the defile at Lejjun, a Turkish battalion with several machine guns was observed deploying on the plain below. They were charged without hesitation by the leading regiment, the 2nd Lancers, and in a few minutes the division was able to continue its advance. Less prompt action would have caused fatal delay in this case.

The engagement at Haifa gives some brilliant examples of the mounted attack against infantry, artillery and machine guns. On approaching that place the 15th Cavalry Brigade was met by the fire of a battery of 77's on the slopes of Mount Carmel. At least ten machine guns covered the entrance to the town. The Jodhpur Lancers made a brilliant charge, riding over the machine guns and pursuing the enemy through the streets. A squadron of

the Mysore Lancers was sent over Mount Carmel at the same time, to turn the place from the south. They captured two Turkish naval guns, mounted on the ridge of Carmel and made a very gallant and successful charge in the face of a very heavy machine gun fire. The Turks made a very stubborn defense of Haifa and but for the dash of the 15th (Imperial Service) Cavalry Brigade, would have undoubtedly held out for a considerable length of time.

Another example of a charge against riflemen and artillery occurred on September 23rd, near Makt Abu Naj. The patrols of the 29th Lancers were fired upon by forces which were covering the ford. The Middlesex Yeomanry moved around the enemy's left flank, while two squadrons of the 29th Lancers charged a mound forming the center of the hostile position, and captured 800 prisoners and 15 machine guns. There were two charges by Jacob's Horse on the left bank, which were held up by hostile artillery. The accompanying horse artillery, the Hampshire Battery, was ordered into action. This battery was immediately subjected to heavy fire from two concealed enemy batteries. A squadron of the Middlesex Yeomanry forded the river at Makt Fathallah and charged these batteries, putting them completely out of action. This resulted in the withdrawal of the enemy.

There were some examples of successful charges by the Germans in 1914. On the 1st of September the 18th Cavalry Brigade (15th and 16th German Hussars) charged in waves against the English infantry. This infantry was advancing and seriously threatening the left wing of the 4th German Cavalry Division. The charge was successful and stopped the British advance.

On the 10th of October the 9th Hussar Regiment

(German) at Orchies, near Lille, captured 200 French replacement troops in their first charge. The first squadron of the regiment thereafter charged a wagon column, marching under escort of infantry. They were received by rifle fire. In spite of this they captured 5 officers, 250 men, 36 horses and 23 wagons. The mounted men with the column escorting the wagon fled. The Hussars lost in this engagement 3 dead, 2 officers and 12 men wounded, and 6 horses killed. The enemy lost 30 dead and 40 wounded, in addition to prisoners and the train.

Among many charges recorded during the war there occurred an example at Fretoy, September 7th, 1914, when an English squadron charged a German squadron. The English made the charge at speed while the Germans seemed to have charged at a lesser gait. The German charge was overthrown. The English squadron rallied and came into action again.

In 1916 near Bobocul, Rumania, three squadrons of the 24th Guard Dragoons, charged against a strong Russian cavalry force. The Russians seem to have partially avoided the charge and to have partially met it by mounted rifle fire. The Germans succeeded in driving the hostile cavalry from the field.

"By adopting every helpful device, the mounted arm can continually improve its fighting power. Nevertheless it must not lose faith in its old and tried weapons, the sword and the lance. The cavalry leader who has the knowledge and the nerve will again and again find his opportunity to go in with the cold steel. Losses must be faced, but in war, as of old, experience teaches that a mounted attack, exactly timed, is almost always successful, and is less costly than a prolonged fire fight." [1]

[1] Field Marshal Allenby, *American Cavalry Journal*, Jan. 19, 1921.

CHAPTER VIII

CAVALRY TACTICS—DISMOUNTED ACTION

The underlying principle of cavalry dismounted action is, that ten men on time are better than a hundred men five minutes too late. The cost of the cavalryman as compared to the infantryman is considerable. To justify this expense there must be some good reason. The reason is mobility. Mobility, shock and fire power—the combination of these factors will put cavalry again back in its place as a necessity in warfare. The correct balance of these qualities will make a cavalry a powerful aid. Insistence upon any one to the exclusion of the others will reduce the cavalry's value against any opponent who balances its capabilities properly.

The drawback to the full development of the fire value of cavalry as compared to the infantry has been in the past the necessary shortage of men absent, caring for led horses. The dragoon, or dismounted cavalry principle is almost as old as the cavalry itself. The very first cavalry was organized on the dragoon principle—the horse simply being used to carry the warrior to the place of battle. Arrived there he dismounted and wielded sword and spear. It was only after many years of this use of cavalry that the idea of the charge was developed and reached a high state under Alexander. Even Alex-

ander used the dragoon principle when he mounted his most skillful footmen upon horses in the pursuit of Darius. There is very little new under the sun.

What is new in the present day and time is the development of the light automatic weapon. This gives the cavalry a largely increased fire power, both through the increased amount of fire that can be developed and through the ability of the cavalryman to carry more ammunition than the infantryman.

The use of shock is confined to comparatively small operations. Its importance for these and its moral importance must not be lost sight of. The fact remains however that fire power is the main consideration for large operations and is the justification for the being of cavalry. Cavalry must develop thoroughly the ability to fight along side of, in support of, and as, infantry any time it is called upon. This ability adds to the importance of the arm a weight that it has lacked since the invention of the breech-loading, rapid-fire small-arm. The proper development of fire power raises cavalry from the position of an auxiliary to that of a highly important fighting branch.

The main fighting requirement of cavalry is that it shall be able to move swiftly to the appointed place and upon arrival deliver an effective volume of fire. To achieve this the cavalryman must combine the technique of his own branch with the requirements of modern combat, in other words, to take fullest advantage of all that is helpful to the cavalry and to combine this with all the essential infantry practice, the result of their experience.

It must be understood that cavalry has too many diverse capabilities and is too difficult of replacement to sacrifice it needlessly to perform infantry functions when there is

sufficient infantry present to solve the problem. Cavalry should not be used as infantry when there is any opportunity of securing infantry, but should be called upon for use as a mobile reserve able and fit to move to any part of the battle line—to reinforce hard pressed infantry, to fill a gap in the line or to drive back an enemy force that has forced an entry. It should be used for these emergencies. Fullest advantage of its mobility would be taken by using it in flanking movements—both to reinforce a threatened flank and to move against the enemy flanks. In addition, its rôle in the advance or the retreat makes it invaluable. The general who wishes decisive victories will use his cavalry only for these purposes and in the pursuit. Napoleon's remark upon one occasion when his cavalry failed to make an aggressive pursuit is worth quoting "What, no guns or prisoners captured? This day's battle has been useless."

For all these purposes cavalry has need of fire power and the highest development of fire power. No factor should be neglected that will increase fire power. Cavalry must not neglect any factor that will increase its dismounted offensive action. The cavalryman ceases to be a cavalryman the moment that he commences the fight on foot. This combat has to be carried on with almost the same laws that govern the foot soldier in the same conditions. The chief difference is, that the cavalry should not tie themselves down with a long slow development of fire and preparation of fire. They must gain their results more quickly so as not to lose the advantages of their mobility. For this reason their fire power, as compared to the infantry, must be stronger proportionally.

The cavalryman has certain advantages over the in-

fantryman. First that he arrives on the field, after a much longer distance covered, but much less fatigued compared to the infantryman, who has carried a heavy pack. The infantryman has also to use the same set of muscles in battle that he used on the march. The cavalryman may have his riding muscles fatigued but has a comparatively fresh set to carry on with when he sets foot to ground. He has not been under the necessity of carrying his equipment on his person but leaves it on his horse. He can carry more ammunition upon his person and a reserve upon his horse.

He labors under the disadvantage of having to care for his led horses. This makes a cavalry unit suffer a diminution in strength amounting from one-fourth to one-tenth, upon dismounting. The strength of cavalry, unless carefully husbanded, goes down relatively faster than that of infantry, because of the loss of horse flesh in campaign—the loss of a horse meaning the loss of a man. In a populated country the Germans seized all bicycles and wagons to obviate this, but this would be impossible in a sparsely settled area.

The problem is then to produce with smaller numbers, the same volume of fire as the infantry, or a superior volume. The fact that the cavalry force, by its ability to range far and wide, to appear unexpectedly on the flank and rear of the enemy, to disperse, screen and deceive, to threaten the enemy arteries of supply and to protect and gain information for its own force, can render itself exceedingly necessary and valuable in ways not open to the foot soldier, is left out of the discussion purposely. The question now is of fire power and the steps necessary to increase it within the cavalry itself. The other modes of increasing the offensive fire

power of cavalry have been taken up in a preceding chapter on auxiliaries with cavalry.

These steps are now being taken—first by the assignment of automatic rifles to the troop and secondly by the formation of machine gun troops and squadrons. This is excellent as a starter. What we must now endeavor to do is to devise several things—one being the best method of carrying the automatic upon the horse, secondly the distribution of the automatics in the troop. There are many more, the question of the carriage of ammunition, for example, that will have to be worked out by tests and experiments.

The writer while commanding the Provisional Squadron of the American Forces in Germany made some experiments which may be of interest. It was established to his own satisfaction—first, that the automatic rifle is of immense aid to the cavalry in increasing its fire power; secondly, that it is of aid, not only in the troop or squadron firing line but as an aid to the offensive power of small patrols and contact platoons, small advance guards, etc.; thirdly, that it is impracticable to carry the Browning automatic upon the soldier's person and unsatisfactory to carry it upon his horse, the only feasible method being to carry it upon a led horse. In this case two rifles were carried slung in a slightly enlarged gun boot on a McClellan saddle, with a top and side load of clips carried in ordinary saddle bags. It was further established, that the inclusion of led horses in the same units with the regular riflemen's horses was unsatisfactory, and, that it was highly desirable to develop a type of automatic rifle lighter than the present Browning but equally efficacious, that could be carried upon the trooper's horse in lieu of the rifle, with every man armed

therewith, and lastly, that until such a weapon was developed and issued the most feasible method from a tactical viewpoint was to make an automatic rifle platoon of one platoon in each troop leaving the other two as rifle platoons.[1]

This last for several reasons, the first being mentioned —the drawback to mobility and rapid mounted action caused by the inclusion of led horses in the sabre and rifle platoons. The ideal form of mounted action seems to be the combined fire and shock. With a troop moving along a road, the column interspersed with led horses, it is going to be difficult both to form line quickly and to get the automatic rifles out to a flank to commence firing at both and the same time. The better system is to combine all the automatic rifles in one platoon, to have this platoon move at the rear of the column, its commander to ride with the troop commander. In an emergency requiring quick action the shock portion of the troop could form line, or could dismount to fight on foot as circumstance dictated, while a swift order to the chief of the automatic platoon would result in his co-operation immediately to support a mounted attack by fire or to reinforce a dismounted firing line.

This same system could be caried on up to the squadron—the automatic platoons forming a troop which could be used in the same way. The automatic platoon could be subdivided into sections and squads.

The formation of the automatic rifles in a platoon in the troop or in a troop in the squadron would be no bar to assigning them to units ordered to detached duty.

[1] Since the above was written the new tables of organization have been issued prescribing exactly this formation, of two rifle platoons and one machine rifle platoon per troop.

The question of the number of men to leave with the led horses simply resolves itself into a question whether it is more desirable to keep the led horses mobile or immobile. This of course depends upon the special conditions obtaining, but the safest rule is to keep the led horses mobile. The cavalry must retain its freedom of action; if it ties itself down to a group of immobilized led horses it is parting with it. With the augmentation of his fire power by the automatic rifle the cavalryman can make up for the absence of his horseholders by an increase in the rate of fire. The automatic rifle ends the discussion in the cavalryman's mind in which he tried to balance the advantages of more mobility and fewer riflemen or less mobility and more riflemen. The British experience in Palestine taught them that immobilized led horses were impracticable and dangerous, they did away with circling, coupling, etc., because of the danger of aerial bombardment by machine gun or bomb—a large group of immobilized led horses furnishing a very attractive target, difficult to conceal.

He can have both mobility and fire power but he is still under the necessity of caring for his led horses. There are some new factors to consider in this. One of these is the power of aeroplane directed artillery—the other the power of aerial bombardment. These two considerations force the cavalryman to disperse and conceal his led horses to as great an extent as possible. We should practice scatter formations with large groups of led horses and accustom men and horses to dispersed formations and quick assemblies therefrom.

It is essential that led horses be quickly available for rapid mounting whether for a swift withdrawal or the surge forward in pursuit. To facilitate this, designated

officers and non-commissioned officers will have to take charge automatically, the senior to assign areas for each unit and establish means of communication with them and with the firing line. This should be an important part of peace time training so that in war there will be no necessity for extemporization. The question how far from the field of fire a leader should dismount should be governed by the principle that the cavalry is to move forward mounted as far as possible so as to retain its mobility. It will probably be necessary to dismount at much greater distance than we are accustomed to in peace time maneuvers. It may be necessary in many cases to cover long distances on foot with suitable security formations protecting the front and flanks.

It is not so necessary in the cavalry that the line of advance should coincide with the line of attack; it will often be possible to change the base of the attack after reconnaissance by taking advantage of the mobility of all or part of the force.

A large field of usefulness and value is opened to the cavalry that takes fullest advantage of its mobility in conjunction with its fire power. Hostile forces can be caused considerable loss and upsetting of their dispositions by surprise fire on our part; a quick sharp burst of accurate fire, surprise fire, followed by rapid mounting and disappearance, to reappear against the enemy from another angle, should be the form used against superior forces, especially if they are dismounted. It takes a large dismounted force some time to deploy and get into action and a great deal of loss both in personnel and in time can be effected by this means. It is best to hold the fire in cases of this nature until it can be opened simultaneously. The coming into action by

driblets must be condemned in this class of work. The cavalry must attain results by fire more rapidly than the infantry.

The cavalry officer must always keep the enemy's flanks and rear in mind. He must especially search out the enemy flanks in rear guard action. By mobility and energy a comparative handful of cavalry can hold back great numbers of pursuers by detaching elements to fire into their flanks. A few well directed bursts of fire into an enemy's flanks will considerably dampen the ardor of an enemy pursuit, force him to make dispositions for this unknown danger and gain valuable time for the withdrawal of the main body. Rear guard actions, to be successful, will especially require dependence upon rifle and machine gun fire. This must be based upon the principle of the withdrawal of alternate units—one part of the force mounting under cover of the fire of the other. A skillful officer must be detailed to pick out good defense positions and good protection for led horses in the rear.

Dependable service of security must insure against our being caught by enemy fire while in the act of mounting and dismounting. Every opportunity should be taken to catch the enemy in this position. It must not be forgotten that responsibility for security rests upon the commander of every unit and that it is his duty to supplement measures that he considers insufficient.

It will not always be possible to break off a fire fight when once entered into. The cavalry officer must not, however, be hypnotized by the action in his front to the neglect of hitting the enemy in flank or rear by a mobile detachment. This is one of the best means of withdraw-

ing. A mounted reserve is an invaluable thing for this purpose.

A mounted reserve can also be of invaluable assistance in guarding the led horses which otherwise may be at the mercy of any wandering enemy patrol. It can also furnish combat patrols, furnish protection to the flanks and rear, undertake the first pursuit and cover a withdrawal.

Cavalry in defense must fight bitterly and be prepared to sacrifice itself to the last man. It is usually so situated that its position has an important bearing in relation to the rest of the army. The Japanese defence of Sandepu in the Russo-Japanese war was an example of an excellent and stubborn defense from which resulted untold good to the remainder of the army.

Training must include training for speed. The difference between a few seconds gained or lost in opening fire may mean the difference between gaining an engagement and losing it. In a well-trained troop of cavalry fire has been opened in five seconds after the command to fight on foot has been given.

Speed on foot is just as essential. In minor operations, especially against heavily laden and tired infantry—a swift run of a few hundred yards with a column of lightly equipped and comparatively fresh troopers will often put one into position to outflank and roll up an enemy force.

Cavalry must not engage in dismounted frontal attacks when there is any possibility of attacking in flank or rear or by the charge. A dismounted frontal attack should be the exception for cavalry and it should be, moreover, supported as are the infantry frontal attacks,

with sufficient artillery and machine gun support. Cavalry under these conditions will have the same problems to solve as infantry and must have the same means of solving them as regards armament and auxiliaries. These attacks must be made in depth.

If cavalry is to fight with infantry against the common foe and against enemy infantry it must have the same means of attack as the infantry. The only radical addition necessary in the cavalry is the bayonet as regards the equipment of the individual. He must have some means of clinching the argument of battle. We have seen many dismounted attacks practiced upon our drill grounds and combat ranges. All the attention is devoted to fire discipline and fire control. No one seems to bother himself as to what it is all about. The fact that fire is only the preparation for the attack is lost sight of. The actual attack is not practiced. What is the soldier to attack with? With his clubbed rifle, his fists or the pistol? It is extremely doubtful if the pistol is as good a dismounted attack weapon as the bayonet. The bayonet is the final argument of the infantry. If the pistol were superior they certainly would have adopted it. It is the cold steel that finally decides the infantry attack. It should no less decide the cavalry attack. Training in its use is not long or complicated—it adds very little to the equipment of the cavalryman, he has a fixture already upon his rifle for its attachment. Its weight is nothing to worry over.

We must develop training in fire action and practice in ammunition supply. A great deal of cavalry fire fighting involves the care and protection of led horses, and the problems of rapid mounting and dismounting. All our combat work should be in conjunction with the horse.

The spectacle seen so many times of cavalry units marching dismounted to the combat range, there to spend hours practicing infantry formations, should be changed. Every firing problem should involve the passing from mounted to dismounted action, the care of led horses, establishment of security, the use of mounted reserves and the passing from dismounted to mounted action. This will be of especial value as so much of the cavalry work in the opening days of war is done by small detachments, platoons, troops, etc. We must practice in peace what will be required of us in war.

Practice in this style of combat work will develop many faults that are in need of correction. Some of the most common ones observed are noted here. They refer principally to the work of squads, sections and platoons.

Automatic rifles too slow in getting into action.

Men, especially scouts masked fire of own units instead of withdrawing to a flank.

Riflemen too slow in opening up emergency fire.

Men remained prone in cover from which targets could not be seen, instead of moving to better positions, or sitting or kneeling.

Leader made no effort to find out if his men could see target.

Leader made no effort to change men after he had seen their inability to see the target.

Men did not set sights as ordered.

Leader too cautious.

Range to new targets not given by leader, even after he could see shots were short or over.

No liaison between squads of a section.

Liaison between led horses and firing line poor.

Leader allowed men to fire over loose dirt bank—thus

raising a cloud of dust every time they fired. Would bring down machine gun and artillery fire.

Many leaders did not direct their units so as to bring all rifles and automatics into action—in many cases less than half were firing, due to faulty positions.

Horses not properly linked.

Stirrups not placed correctly.

Led horses not properly distributed amongst holders, some men having only two, while others had five.

Too much tendency to confusion, talking, shouting in quick transition from mounted to dismounted action, and vice versa.

Led horses not properly mobile in problems requiring their mobility.

Led horses placed directly behind firing line so that one would have suffered from the "overs" or "shorts" directed on the other.

Tendency to allow men to bunch.

Advantage not taken of cover. More practice required in this, difference between cover from view and cover from fire explained, with value of each.

Scouts content with galloping back madly but without information upon which leader could act intelligently.

Many section leaders take command of their nearest squad instead of handling two sections.

Section leaders split squads detaching part to each flank thereby making squad leader superfluous.

Men too slow in passing from mounted to dismounted action and vice versa.

Unit leaders not careful enough in designating responsible man for led horses and giving him general instructions in advance.

Unit leaders not skilled in making personal reconnais-

sance while men and horses are under cover from fire and view, fixing avenues of approach, issuing instructions to subordinate leaders and making all preliminary dispositions.

No proper grasp of the principle of fire and movement, advancing one unit under cover of the fire of the other.

No skill in handling sub-divisions—not enough attempt made to secure flanking fire with automatics for example.

The whole success of the dismounted work depends upon the ability and degree of training and command shown by the subordinate leaders, the squad and section leaders especially. They should be habituated to command by giving them authority in their daily work, fullest authority possible, over the units that they will command on the firing line. To have them function well as leaders in the firing line they must be accustomed to commanding and having authority over their men. Otherwise they will simply be in the way when they are most badly needed.

CHAPTER IX

CAVALRY TACTICS—VARIED REQUIREMENTS

The Advance Guard:

The advance guard is primarily a security formation for advancing troops. For cavalry, with its offensive spirit, it is the first blow struck at the enemy. This first physical contact is very important. Two things can happen; the first being that the advance guard may be efficient enough to push on through any interference without interrupting the advance of the main body. The second possibility is that the advance guard may involve itself in a situation from which it is impossible to withdraw. The problem then for the main body is to extricate the advance guard from its dilemma. This will undoubtedly involve a combat under conditions that were not selected by the main body. In other words, an improperly handled advance guard may result in loss of initiative. For this reason, it is important that the commander of the advance guard be selected carefully and carefully instructed. It is important that the commander of the main body of the cavalry command be well up with his advance guard.

Napoleon used the advance guard as a holding force. This is an essentially offensive use of this formation. It implies sufficient skill upon the part of the advance guard

commander to meet the enemy in an unfavorable situation, to catch him off guard or unprepared, and then to grapple with him and hold him for the heavy blows of the main body.

The enemy may be found in superior strength. With this use of the advance guard it is necessary to hold him. The duty of the advance guard is then to seize strong points and with rapid rifle, machine gun and horse artillery fire to hold the enemy until the arrival of the main body. This necessitates a wide front and plentiful use of ammunition. The advance guard in such a situation acts as a pivot from which is swung the crushing blow of the main force.

In order to fight an enemy he must be held in position. A man who is running away cannot be hurt by a blow. He has to be held by one hand and punched with the other. An attempted use of these tactics was made by the Germans in their initial attack in 1914. While the British were in retreat on the 25th of August, the Germans wished to hold them for an outflanking movement. To accomplish this they sent forward four cavalry divisions accompanied by one Jäeger battalion and a large number of guns and howitzers of all calibres. The dogged stubbornness of the British and the superiority and dash of their cavalry made the scheme ineffective in this case.

It must be remembered that the advance guard is primarily a security force. Security is based on three factors, viz., time, space and resisting power of troops. The first two, time and space, are comparatively simply factors with cavalry mobility as aid. Resisting power must be increased by increasing the fire power of cavalry units proper and by the assignment to the cavalry of

auxiliaries that will supply it with added power, automobile and horse artillery and a plentiful supply of machine guns.

The advance guard commander must secure the uninterrupted march of the main body by accelerating its passage through cities and towns, marking the streets and leaving directions that can be easily followed. He must seize the mails and telegrams in hostile countries. He must insure the absence of hostile artillery on his flanks. He must gather all information possible for the intelligence service in his rear.

The work of the advance guard, which is mostly along roads, would be enormously facilitated by the addition of armored cars. These could be rushed through to clean out small parties of the enemy who might otherwise delay and hinder the march. They were used for this purpose in the first phase of the World War in 1914.

An example of the combined use of cavalry and armored cars in the advance guard is found in the action of the 20th Lancers and Armored Car Battery moving from El Afule in the Palestine Campaign, September 20th, 1918. On debouching from the pass, Turkish forces in strength were found astride the road. One squadron dismounted, and the armored car battery held the enemy in front by fire power while the remaining squadrons of the regiment charged the left flank. The Turks were dispersed with a loss of 46 killed and wounded and 470 captured.

Communication with the rear would be aided at a considerable saving of horse flesh by the addition of sufficient motor cycles. For the small advance guard, these would be nearly sufficient. The larger force would re-

quire improved means of communication—radio, buzzer, aeroplane messages, etc.

The advance guard commander must be thoroughly cognizant of his general and special mission. He should be informed as to whether he is empowered to bring on an engagement or not. He must be well aware of his responsibility as to the security and uninterrupted advance of the main body. This will require rapid flank movements to oust small hostile parties from his front. He must seize and protect the march through defiles. He must seize bridges and cover crossings. An excellent example of this duty was the action of the cavalry under Allenby in 1914 when, in the pursuit after the Battle of the Marne, he seized the bridge at Charly-sur-Marne and Saulchery and advanced rapidly to the high ground north of Fontaine Fauvel covering the passage of the First Corps over the Marne.

The advance guard commander must keep his machine gun and artillery commanders well up with him towards the front. He must be prepared to use any and all forms of offensive action; the mounted attack, the dismounted attack, the combination of fire and shock and the fullest use of his artillery must aid his mission when occasion requires.

With a large command, he must cover parallel roads as well as his own road. He must constantly keep his mission in mind. In the advance, he, or some officer detailed to that end, must constantly observe positions for led horses in case there should arise a necessity for sending them back.

In minor operations the endeavor of the cavalry commander must be to deceive the enemy as to his strength. This would apply especially to a holding action. Every

artifice must be used in the case of a holding attack to convince the enemy that superior forces are on his front.

The spirit of the offensive finds its highest example in the proper handling of the advance guard. It is the first blow struck at the enemy. Upon the result of this blow depends in a great measure the success or failure of the succeeding operations.

Rear Guard:

The security of the rear of a retreating body is one of the most typical of cavalry problems. It is a phase of work for which cavalry is unusually well fitted. It requires a vigilant, intelligent and courageous commander. Cavalry can use to the full all of its advantages in mobility and fire power in this sort of work.

The problem requires that an advancing enemy should always be under the necessity of deploying under fire, that he should be covered by the fire of alternate units which cover each other's withdrawal to selected positions in the rear. It requires quick decision and good judgment in the matter of breaking off the fire action and in mounting, in selecting alternative defensive positions and in protecting led horses.

The offensive here as elsewhere is the best defensive. Cavalry must not be content with simply moving along the road pressed back by an advancing enemy. It must hit the flanks of the enemy. It must guard against the enemy's attempts at a parallel pursuit by covering the flanks of the main body as well as its rear. It must not hesitate to sacrifice itself to gain time for the withdrawal of its main body. It must use fire and shock and the combination as they seem necessary.

At the initiation of a retreating movement, it must cover the withdrawal and break off the fight by great activity. The essential points in this stage are the holding of some few strong points firmly while the main body draws away under their protection. The pursuing enemy is liable to concentrate his attention upon these, to the neglect of the main body.

To realize thoroughly the value of cavalry in the rear of a retreating force, the retreat of the British Army in 1914 must be studied. The value of the cavalry in the rear guard was especially marked in these operations. One example was the rescue of the 5th Division in the retreat from Mons, August 24th, 1914. This division was dangerously pressed and in danger of being outflanked by the pursuing Germans. De Lisle with the 2nd and Gough with the 3rd Cavalry Brigades came to the rescue. They threatened and harassed the pursuers to such an extent as to take this pressure off the retreating division and allowed it to withdraw in good order.

Again on the same date at Solesmes the rear guard of the 3rd Division, under McCracken, was heavily attacked. Allenby, with De Lisle's 2nd Cavalry Brigade (4th Dragoon Guards, 9th Lancers and 18th Hussars) attacked the Germans so fiercely as to force them to desist and thus permitted the division to withdraw unmolested. On this same day Grenfell, with the 9th Lancers, saved the guns of an artillery unit and dragged them off the field safe from capture.

On the 26th of August during this retreat, after several exhausting and demoralizing days it was absolutely necessary to reorganize and reform the British forces. The British losses to date had been some 15,000 officers and men, 80 guns, most of the machine guns and great

quantities of transport. No effective stand could be made until order was produced out of the chaos of the retreat. "To enable this to be brought about, it was first necessary to look to the cavalry" (Field Marshal French). Allenby was given orders to hold off the enemy. This he accomplished brilliantly. Gough, at Saint-Quentin, with the 3rd Cavalry Brigade and Chetwode, with the 5th Cavalry Brigade, at Cerizy, vigorously attacked the leading troops of the German cavalry at both these places and threw them back with loss upon their main bodies. This enabled the infantry and the remnants of the artillery to withdraw to a new line and re-form.

There is no doubt that the British Cavalry saved the British Army on this and other occasions in this retreat. This was accomplished by fire and shock, and a high degree of mobility, combined with an effective use of the supporting horse artillery.

In Palestine there is found the example of the successful covering by the Second Light Horse Brigade of the withdrawal of the 181st Infantry Brigade through Es Sir on March 31st, 1918.

The Germans knew the value of cavalry and used it extensively in this sort of work. The enemy forces opposing the British advance, after the tide had turned at the first battle of the Marne, consisted chiefly of cavalry with a strong artillery support backed up by Jäeger detachments. Sir John French, as a result of his study of the German cavalry before the war, states that they were especially trained in this sort of work—rear guard actions —which they performed in this retreat. They carried a large number of machine guns which they were trained to handle very efficiently. To each brigade of cavalry was attached whenever possible a regiment of Jäeger,

picked riflemen, chosen for their skill in shooting and in taking advantage of ground. These troops were especially valuable for the defense of river lines and positions which were intended to cause delay to an advancing enemy. They permitted the withdrawal in good order of the First Army under von Kluck. The work of the Cavalry Corps Von Marwitz is well worth studying in this campaign.

Some of the most valuable work performed by the cavalry in the whole war was work of this nature in the opening phases of the warfare on the Western Front. The successful performance in this phase of cavalry duty alone would justify the existence of the branch.

The Pursuit:

Cavalry is indispensable to that army commander who wishes decisive victories. Without cavalry, an army will fight one indecisive battle after another, continually fighting the same antagonists who have been allowed to withdraw and re-form. The use of cavalry in a pursuit is only a logical carrying out of the theory of absolute war —decision by battle—and that battle is not decisive in which the enemy is allowed to withdraw in good order. This theory of war requires that an enemy force shall be thoroughly broken and incapable of re-forming; his tactical unity and his morale thoroughly destroyed.

Without aggressive and relentless pursuit the enemy multiplies because the same units are fought again and again with the heavy proportion of losses on the side of the attacking forces.

Beaten troops have low resisting power immediately after a battle. They are psychologically ripe for panic;

with confidence in their leaders destroyed, tactical cohesion broken, and with fatigue and uncertainty adding to the whole. At such moments the terror inspired by the sudden appearance of shouting horsemen vengefully spurring into the mass with drawn sword will effectually turn a retreat into a rout.

To allow beaten forces to draw off unmolested, to reorganize and to be again forced to attack is very poor generalship. There can only be one effective pursuing force—this is cavalry.

There are many examples in history of the failure to use cavalry in the pursuit. One example was the Prussian cavalry at Sadowa; it is said that the King of Prussia refused to let it pursue in order to spare the enemy. Another example was the Battle of Froeschwiller. What would have been left of MacMahon's beaten army if they had been pursued relentlessly down the Neiderbronn Road!

The finest modern example of the pursuit value of cavalry is found in the Palestine Campaign of Allenby. He has this to say concerning the pursuit by his cavalry (Report to the Secretary of State for War, October 31st, 1918): "The Desert Mounted Corps took some 46,000 prisoners during the operations (Sept. 19th—Oct. 31st). The complete destruction of the VII and VIII Turkish Armies depended mainly upon the rapidity with which their communications were reached, and on quick decision, in dealing with the enemy's columns when they attempted to escape. The enemy columns, after they had out-distanced the pursuing infantry, were given no time to reorganize and fight their way through. In these brilliant achievements, the regiment of French cavalry took its full share, while east of the Jordan, the Australian

and New Zealand Mounted Division, by its untiring pursuit, threw the IV Turkish Army into a state of disorganization, intercepted the garrison of Amman and compelled it to surrender."

An example of a failure to reap the advantages of victory occurred after the Battle of Mukden in the Russo-Japanese War. Marshal Oyama stated "If I had had only two or three cavalry divisions, it would have been impossible for the Russians to have escaped to the north. At least their right wing would have been destroyed with a proper army cavalry." Another example of the danger due to lack of a relentless pursuit is afforded by the situation in regard to the Turkish VII Army in the Palestine Campaign. They were reported by von Papen to Bernstorff as being completely broken down during the first phase of the campaign. Owing to delay in the pursuit by the British, which delay was due to lack of water, transport, etc., this army was permitted to re-form. It afterwards put up a stiff and bloody resistance in the mountains of Judea. Had the British pursuit of this force been enabled to continue this army would have been blotted out as a tactical entity. This would have resulted in a great saving of the lives and time that it finally took to defeat them.

On the Western Front there are many examples of the pursuit by cavalry. Sir John French speaks of the difficulties and danger caused to his forces by the pursuit of the German cavalry. This cavalry was supported by artillery and Jäeger closely pressed his forces in their retreat. They were especially active on the 26th of August, 1914, when the British were driven through the Forêt de Mormal by this force. The British were continually forced to fight them off throughout the course of the retreat. This

pursuit would have been still more effective if the Cavalry Corps von Marwitz had not been transferred from von Kluck's First Army to the commander of the Second Army and sent off on a wild goose chase to the northwest when it was badly needed in the pursuit of the British.

The cavalry which pursues directly in the rear of a retreating body is throwing away one of its chief advantages—mobility. It should pursue on parallel lines. The enemy is certain to leave strong troops directly in his rear. These must be worried and held as much as possible but energy should be concentrated on his flanks, on getting, if possible, ahead of him and holding him in front of some obstacle or holding him up on his line of retreat. The pursuit that confines itself to the rear of the retreating forces can be held up by a few rifles and machine guns or artillery. The pursuit that aims at the flanks is exceedingly difficult to withstand.

An excellent example of a pursuit carried out on parallel lines is that by General French in the South African War in his pursuit of Cronje. This pursuit resulted in the capture of Cronje, who was intercepted at a crossing of the Modder River.

An example of parallel pursuit is found in the Palestine Campaign after the break through by the infantry on the Ramleh line. The infantry was engaged in breaking down the last organized resistance of the Turks. At the same time the swift action of the cavalry insured the success of the operations by destroying or capturing the whole Turkish force east of the Jordan River. Pressing along all night in parallel columns, the 4th Cavalry Division on Megiddo (Lejjen) and the 5th Cavalry Division on Abu Shushesh (a few miles to the north), the Plain

of Esdraelon was reached before dawn and the Turkish forces rolled up.

Close cooperation of cavalry and horse artillery is essential to an effective pursuit. In line with this, it is interesting to read the memorandum issued by the Commander-in-Chief of the British Forces on the 10th of September, 1914, after the First Battle of the Marne. "The latest experience shows that the enemy never neglects an opportunity to use all his available artillery in forward positions under cover of cavalry and other mobile troops.

"Our cavalry is now organized into two divisions, the first of three, the second of two brigades, each with a brigade of horse artillery. During the present phase of the operations, which consist of as rapid a pursuit and pressure of the enemy as is possible in his retreat, two corps will generally be in the first line. A cavalry division will be directed to work on the front and flanks of either corps and well in advance. The commander of the cavalry will remain in the closest concert with the corps commander on the flank on which he is working.

"The corps commanders will send forward with their cavalry as much of their field artillery as can be usefully employed in harassing the enemy's retirement. They will place them under the cavalry commander for the day, the latter officer being responsible for their safety.

"When, owing to the darkness, the field artillery can no longer find useful targets they will be withdrawn from the cavalry back to the division to which they belong. Should the enemy make any decided stand during such operations and a general action arise or become imminent, the field artillery in front will either fall back or retain their position, at the discretion of the corps

commander, and again come under their divisional commander. The withdrawal from under the supervision of the corps commander will always remain at the discretion of the corps commander." [1]

The pursuit by fire must not be lost sight of and the retreating forces must be kept under fire as long as possible while the mounted pursuit is under way.

The mounted pursuit must not be too reckless; many fine cavalry units were nearly annihilated by rash and ill-considered mounted pursuits of German forces. These forces drew them skilfully under the fire of concealed machine guns or artillery. Many French cavalry units met serious losses in this manner.

The cavalry commander has need of all his energy in the proper carrying out of a pursuit. He must magnify his numbers by every artifice. Colonel von Alvensleben, in 1870, with three small squadrons in pursuit of the retreating French so harassed and worried the enemy that a large army of 70,000 men was convinced that it was pursued by the entire German forces. The plans and dispositions of this force were changed in accordance with this viewpoint. The course of the war was materially influenced by this. Fighting by day and perpetual sniping and alarms at night alarmed the enemy and disturbed his rest and strengthened his belief that he was being relentlessly pursued.

Cavalry in pursuit must never lose contact with the enemy. After the Battle of Forbach in this same war, the German cavalry lost all touch with the enemy and allowed him to withdraw unmolested. The touch with the enemy is exceedingly liable to be lost in the first flush of victory when everyone's mind is filled with the duties

[1] "1914," Sir John French, page 132.

of reorganizing and there is a certain amount of fatigue.

No consideration should be allowed to stand in the way of a relentless pursuit by the cavalry. On one occasion Blücher reprimanded the German cavalry for failure to pursue. The excuse was that the horses were too tired. Blücher's reply was "No attention should be paid to the excuses of the cavalry, for when such an object as the destruction of the enemy's army can be attained, the country can well spare the few hundred horses that die of exhaustion."

The Raid:

The condition of the enemy's rear and line of communications is much more sensitive today than it has been in past wars. This is due to the modern army's increased dependence upon its rear with all its thousand and one details of supply for the highly complicated and technical machine at the front. In addition to the opportunity of stopping the flow of these supplies, even for only a short time, a raid may find his artillery without support, his reserves without proper security, his aeroplane hangars may be demolished and railroads, roads and bridges destroyed. An incalculable amount of damage may be done by even a small force of cavalry daringly led and well supplied with demolition materials.

Railroads may be cut and important arteries of supply irretrievably harmed. In cutting railways, it must be remembered that they should not be cut too near a station or shops as there will undoubtedly be repair material and means available at those places. An excellent raid of this nature was carried out successfully by the 2nd Light Horse Brigade on March 25th, 1918, in the Palestine

Campaign. A party from this brigade reached the Hejaz railway seven miles south of Amman and blew up a section of the line during the night. This was the main line of the Turkish communications and its interruption caused untold confusion to their army.

There were many excellent raids by the Russian and German cavalries on the Eastern Front in the World War. Full accounts of these raids are not yet available for study.

The French cavalry made an excellent raid productive of good results on the German communications on September 17th, 1914. They operated from Roye and moved rapidly east as far as the neighborhood of Ham and Saint-Quentin. Another small raid by a single squadron of French cavalry at the commencement of the German retreat from the Marne nearly succeeded in capturing von Kluck and his entire staff who were forced to take to the fields with any weapon they could find in order to defend themselves.

There is a report of a decisive raid which took place in the Balkan War in 1912. This raid was performed by the Bulgarian Brigade Tanew, after the Battle of Dedeagatch. This brigade succeeded in capturing 361 officers, 13,500 men and 8 guns. Another excellent raid was the one performed by a Serbian cavalry regiment after the Battle of Kumanovo in Saloniki.[1]

Many raids made, of which there are some notable examples in the Civil War, accomplished nothing of value and on the other hand deprived the army of cavalry when it was badly needed. A notable example was Wheeler's raid into east Tennessee which left Hood without cavalry

[1] Balk, "The Development of Tactics in the World War," (Berlin, 1920), page 241.

and consequently in the dark as regarded Sherman's movements. A better example was "Jeb" Stuart before the Battle of Gettysburg. Mischenko's raids, as well as Rennenkampf's reconnaissances in force in Manchuria, were worthless as far as results went. Von Pelet-Narbonne states that the failure of these raids was due to the small value of the Cossacks, who were neither trained in dismounted offensive action, in intelligence duties, nor had they a keen desire to use the steel. The Russian army authorities so underestimated the Japanese power that they failed to send their European regiments to Manchuria, leaving all the cavalry work to the Cossacks.[1]

An example of a successful raid was that performed by two squadrons of Japanese cavalry a few days before the Battle of Mukden. This was admirably timed. The 280 men of these squadrons marched by night and hid by day, reaching and blowing up an important railway bridge 200 kilometers north of Tieh-Ling directly in rear of the Russian Army. This resulted in the interruption of an important line of communication for several days. It produced a panic at Russian headquarters. The chief value of the raid consisted in the fact that 8,000 troops were diverted from the battlefield of Mukden to guard this line.

[1] "Lectures on and Cavalry Lessons from the Manchurian War," von Pelet-Narbonne.

CHAPTER X

CAVALRY TACTICS—VARIED REQUIREMENTS (*Continued*)

The Mobile Reserve:

The ability of cavalry to act as a highly mobile reserve makes this arm of the greatest importance. Its value lies mainly in its ability quickly to carry offensive fire units to the place of need. It is a valuable and powerful weapon in the hands of an army commander for a variety of purposes; to swing an uncertain issue of battle, to bolster up a weakened line, to cover a retreat and to organize and take fullest advantage of a victory.

Excellent examples of the use of cavalry as a mobile reserve will be found in a study of British operations in 1914, especially the Battle of Ypres.

In addition to its basic mobility, the cavalry division has this advantage over the infantry division as a reserve, that it can come into battle with all its parts assembled including field guns, and other auxiliaries and sufficient ammunition. All parts are equally mobile and it is not forced to come into action piecemeal as an infantry division often is, with its guns, foot troops and ammunition supplies separated.

The British and French both maintained forces of cavalry throughout the war for use as a mobile reserve. Had the German morale not broken so quickly as to preclude further physical action against them, the forces of

cavalry that remained at the close of the war would have been very valuable to carry on a pursuit.

The functions of the reserve are so many that an army commander must use wisdom in selecting the purpose for which he intends to use his cavalry. The inclination of many higher commanders will sometimes dispose them to disregard cavalry as a battle force. In line with this von der Goltz [1] says, "It is not sufficient to have good cavalry, it must be well handled by the superior authorities. These latter are really responsible for many mistakes unfairly laid at the door of the cavalry." The cavalry may be sent miles away on some vague mission to be absent there when their presence in the battle might have an overwhelmingly decisive effect. German cavalry drill regulations state in substance that while attempts upon distant hostile lines of communications may produce valuable results, they must not distract the attention of the cavalry from its true battle objectives.

With cavalry absent during the course of the engagement many contingencies might arise requiring its presence; a flank may be in danger, there may be necessity for a desperate counter-attack, there may be desperate necessity for any number of things that the presence of a mobile reserve would insure.

A mass of modern cavalry, able to fight mounted or dismounted, supplied with horse artillery, machine guns, and a high proportion of automatic weapons would supply a decisive intervening force in battle. Rapidly to extend their own flank when it is threatened, to attack the enemy's flanks, to drive back a break-through of the enemy's forces on any part of the line, to go to the assistance of hard pressed infantry, to minimize the effects of defeat

[1] "The Nation in Arms," von der Goltz, page 206.

and to reap the fruits of victory—all of these are the duties which cavalry is fully capable of performing as a mobile reserve.

An excellent example of the use of the cavalry as a mobile reserve occurred October 31st, 1914, in the second phase of the Battle of Ypres. A gap had occurred on the right of the 7th British Division. The 7th Cavalry Brigade (1st and 2nd Life Guards and Royal Horse Guards) was immediately sent and succeeded in closing this gap and keeping the line intact.

Another example of the use of cavalry as a reserve was on November 29th, 1918, in Palestine, when a hostile force succeeded in penetrating the British line northeast of Jaffa. This force was surrounded and captured by the Australian Light Horse, who were swiftly moved to the threatened point. On the 30th of November, 1918, a similar fate overtook a Turkish battalion which attacked near El Burj; a counter-attack by the Australian Light Horse took 200 prisoners and destroyed the attacking battalion.

Another excellent example of the use of the cavalry reserve was shown in this same campaign November 5th, 1918, when the Yeomanry Division relieved the 74th Infantry Division to enable the latter to join the main attack. The Yeomanry Division reached Shellal (some 20 miles as the crow flies) and came into line on the right of the 74th Infantry Division, 2 miles south of Am Kohleh and took over their sector. The operations near Am Kohleh were in the nature of a holding attack, while the main attack was being developed at Kauwukah. The horses of this cavalry division were sent back to Beersheba, distant about 8 miles.

The saving of the British II Corps in 1914 by the

cavalry under Allenby and Sordet is a good example of the use of the mobile reserve against outflanking attacks. Had it not been for the cavalry at this time the II Corps would assuredly have been pinned to their ground, outflanked and surrounded. This would have resulted in the loss of three out of five British divisions and the loss of the 7th Brigade in addition. It would have resulted, according to Sir John French,[1] in a second Sedan for the Allies.

The employment of the French 7th Cavalry Division in the Battle of the Marne was a good example of the use of cavalry as a mobile reserve.

The mobility of this reserve must be used offensively whenever possible. The outflanking operations in Palestine are cases in point. The Anzac Mounted Division, the Australian Mounted Division and the 7th Mounted Brigade outflanked the Beersheba position on the Gaza-Beersheba line October 30-31st, 1918. The 4th Australian Light Horse Brigade of the Australian Mounted Division captured Beersheba by a mounted charge, galloping over two deep lines of trenches in the face of heavy fire, entering and seizing the town. This rolled up the left flank of the Turkish position.

The attack of the Northern Corps of the Niemen Army against the Russian Army's right flank was carried out by the German cavalry corps consisting of the 2nd, 6th and 8th Divisions. This attack was decisive.[2] Balk says that "Infantry would never have been able to operate at such great distance from the main body and accomplish such results in a short space of time."

In our own Civil War decisive results were gained by

[1] "1914," Sir John French, page 80.
[2] "The Development of Tactics in the World War," Balk.

the use of cavalry as a mobile reserve. A study of Sheridan's operations is especially valuable in this connection.

Another excellent example of the value of a mobile reserve was furnished in the Battle of the Aisne. The advance of the Guards Brigade to the Ostel Ridge had left a considerable gap between them and the nearest unit of the II Corps and also between the I Corps and the river. A German attack was directed upon this weak spot almost immediately. Haig's Corps was in action, covering a front of some five miles and not a single man could be spared. "Here was the supreme example,"[1] says Conan Doyle, "of the grand work that was done when our cavalry were made efficient as dismounted riflemen. Their mobility brought them quickly to the danger spot. Their training turned them in an instant from horsemen to infantry. The 15th Hussars, the Irish Horse, the whole of Brigg's 1st Cavalry Brigade and, finally, the whole of De Lisle's 2nd Cavalry Brigade were thrown into the gap. The German advance was stayed and the danger passed."

The Cavalry Screen:

The use of the cavalry as a screen is practicable if the screen is used offensively. The mere physical presence of cavalry spread out over an area will not suffice. With the modern facilities for aëroplane observation, it is doubtful if the cavalry screen will be of much value except in cases where the hostile air force has lost the control of the air, or weather conditions prevent aerial reconnaissance.

[1] The British Campaign in France and Flanders. Conan Doyle, page 173, vol. I.

The cavalry screen of the present day cannot hope, with an active enemy reconnaissance from the air, to screen the movements of great armies. What it can do is to screen from the knowledge of the enemy the tactical components of its own side. It can interfere and keep enemy intelligence efforts nullified and deny all the knowledge to the enemy forces that aerial reconnaissance cannot supply.

This sort of screening means the movement on a broad front of formed bodies each with its own security dispositions, rapid infiltration, rapid mounting and dismounting, plentiful use of ammunition and the multiplying of numbers by rapidity of action and mobility. It means offensive action throughout.

Valuable work was done in screening operations in the German advance through Belgium in 1914 by the Cavalry Corps von Marwitz and von Richthofen. The former commanded the II Cavalry Corps (the 2nd, 4th and 9th Cavalry Divisions) while the latter commanded the I Cavalry Corps (The Guard Cavalry Division and the 5th Cavalry Division). The advance of the I and II German Armies was well screened by this cavalry. This screening work was especially difficult as it was carried on in the midst of the hostile Belgian population.

Excellent work is also said to have been accomplished by the Cavalry Corps Frommel which succeeded perfectly in screening the change of direction of the German Army operating in the region of Thorn.

Deceiving Enemy:

A large field of usefulness is open to the cavalry which can magnify its numbers by mobility and activity and lead

to false conclusions and dispositions upon the part of the enemy. This has been done innumerable times, notably in the Franco-Prussian War, where the movements of whole armies were changed by the appearance of a few cavalry.

The effect is sometimes secured unconsciously and due to the fact that the enemy has exaggerated the forces he observes. A case in point was the occupation of the village of Sandepu by 4½ Japanese squadrons with one horse battery and six machine guns. The Russians believed this force to be 5 battalions of infantry, 2 squadrons of cavalry, 44 field guns and 5 machine guns.

The appearance of only 2 Japanese squadrons in the rear of the Russian Army at the Battle of Mukden forced into inactivity 19,000 rifles, 5,000 carbines and 36 field guns.

The mere appearance of a cavalry force may have a decisive effect, as occurred at the Battle of Tarnakova in September, 1914, when the Russian Cavalry Division of Novikov had a decisive effect on the operations, in this case neutralizing nearly an army corps.

Cavalry can very easily simulate infantry and can deceive the enemy with regard to the composition of its force on numerous occasions. This would be of value in a threatening or holding attack. It can very easily deceive the enemy in regard to its numbers by taking full advantage of its mobility.

Cavalry in Combat:

The defeating of the formed bodies of the enemy will lead to the purely cavalry fight which will be a combination of fire and shock. It is essential that we do not

totally disregard the possible use of shock action. It will undoubtedly be a factor in any war of movement. It should not, however, be the sum and aim of cavalry training of the future as it has been in the past.

It is first of all essential, in the purely cavalry fight, that the commander should retain touch with all his units. There should be someone responsible for this to take the burden off his shoulders. One system, starting with the squadron, is to have two intelligent privates detailed to the squadron commander from each troop, who have no other duty than to keep informed of their respective units and be prepared to carry messages to them. Each squadron in its turn details a non-commissioned officer and assistant to the regimental commander, and so on up.

The commander must not fail to notify his senior subordinates where to assemble in case of a reverse. This point should be determined beforehand, if possible.

Trains must be provided for. They must be in such position as to be able to advance or retire without confusion.

If the result of the fight is at all in doubt Spartan measures must be taken and the last reserves smashed in without thought of anything except victory. Many an uncertain battle has been lost by too great niggardliness with reserves. Daring is a strong factor in success.

It is essential never to lose sight of the fact that the spirit of cavalry is offensive and to look upon a temporarily defensive rôle only as a means of preparing for the counter attack. It is necessary to increase the rate of fire power and utilize every feature of the ground in order to release men for this counter stroke.

If the enemy's strength is unknown, it is better to make tentative attacks that will force him to disclose

himself and to hold the bulk of troops in hand until enough information is gained to warrant complete action.

Keep a careful and automatic check on ammunition. The best laid plans can be defeated by the eleventh hour report in a critical situation that the ammunition is failing.

If the hostile cavalry acts in conjunction with infantry, effort should be made to isolate it and destroy it.

The commander should be near the head of his troops at the initiation of combat and then should be exceedingly careful that he makes no movement of himself and staff without leaving minute directions as to his whereabouts. He should be careful to visualize the engagement as a whole and not become engrossed in any small part, an exceedingly easy thing to do in a cavalry fight with its large dispersion.

It is exceedingly important that all subordinates should understand the intention of the commander, in order to be able to act intelligently during the many changes and unforeseen incidents of a cavalry fight.

If the command is accompanied by artillery, it must be remembered that its value is rendered almost negligible by insufficiency of information. This is true in all combat but especially true in a cavalry engagement with its rapid movement of friend and foe and the mobility of the targets furnished.

In the cavalry rencontre there is no excuse for a surprise meeting. If there should be one it must be remembered that the great danger in surprise is the hesitation and loss of time caused thereby. To obviate this a leader should always have a rough plan mapped out for every contingency; he must never approach, for instance, a new locality without planning out beforehand what he is

to do on occasion. He must continually observe, and require his subordinates to observe, good cover from observation and fire for his led horses. He must warn all subordinate commanders against the common disposition of commanders to become involved in combat without sending back information. Information, first, last and all the time is essential to the best team work.

It is essential that a cavalry commander be always near the head of his columns. The whole principle is to keep his unit under cover from observation and fire until his plans are made and his orders issued for rapid decisive action.

Many commanders delay until they have information of the enemy down to the most minute details. In other words, they surrender their initiative and do not depend to a great enough extent upon the compelling effect of their own measures. This is the defensive attitude of mind as opposed to the offensive type. Let the other fellow worry. Daring and initiative are the well springs of great success. Inactivity is the direct cause of the losses of many campaigns and battles.

The cavalry commander must keep all elements of his command in mind or have subordinates specially detailed to that end. At the Battle of Wörth, in 1870, the 4th Cavalry Division (German) was forgotten after being told to await orders. Their strength was thereby lost to their side throughout the engagement. It is best not to tie cavalry down with such orders. The cavalry commander must never let absence of orders be an excuse for inaction. Every leader who has cavalry assigned to him must understand that it is too expensive an arm to do nothing.

Dispersion of cavalry, owing to its mobility, is not the

serious fault that it is in the infantry. Too great a dispersion was corrected by the initiative of the squadron leaders of Rederns' Brigade, August 15, 1870, when they marched to the sound of the guns and quickly brought reinforcements of 15 squadrons to the scene of the encounter, thereby themselves correcting the fault of the divisional commander who had dispersed them too much.

An excellent example of cavalry combat was the fight at Haelen, August 12, 1914. German forces consisting of six regiments (4th and 2nd Cavalry Divisions), 7th and 9th Jäeger Battalions, three batteries of artillery, 4,000 sabres, 2,000 infantry and 18 guns all told, tried to force the passage of the Gette River near Haelen. This was defended by Belgian forces consisting of Lancers, Guides, Cavalry, Artillery and Cyclists numbering 2,400 sabres, 450 cyclists and 12 guns. The battle was dismounted on both sides with the exception of a charge made by the 2nd Cuirassiers, 9th Uhlans, 17th and 18th Dragoons of the 4th Cavalry Division, which was repulsed by the fire of the Belgians. The fight was being decided in favor of the Germans when a Belgian infantry force, composed of four weak battalions, entered the fight and turned the scale. The Germans were repulsed with a loss of 3,000 dead and wounded, their advance batteries and a standard.

An excellent illustration of mounted and dismounted attack occurred on April 30th, 1918, when the 3rd Australian Light Horse Brigade was held up near Es Salt by fire from enemy works. These were stormed by the 9th and 10th Regiments, dismounted, while the 8th Regiment galloped along the road and forced its way into the town in spite of strong resistance. The enemy fled, pursued

by one troops which captured 300 prisoners, 29 machine guns and large quantities of material.

Another example of a purely cavalry fight occurred during the Battle of the Marne on September 7th. The 2nd Cavalry Brigade was acting as left flank guard to the Cavalry Division, with the 9th Lancers as advance guard to the Brigade. On reaching Fretoy, the village of Moucel was found occupied by a patrol of the Germans. It was taken at a gallop by the leading troop (about one of our platoons) followed by one machine gun. A troop and a half moved up on the left of the village. Shortly afterward two squadrons of the First Garde Dragoner Regiment charged the village and drove out the troop of the 9th Lancers after a little street fighting. A third Dragoon squadron (German) came up to the village from the north, in support. The troop and a half of the Lancers charged in perfect order the left half of the squadron and pierced it with loss, both sides facing the charge, the Germans at a fifteen-mile rate and the Lancers at full speed. Swinging around after the charge, the 9th Lancers gained the village and rallied on the north side of it. At the same time the 18th Hussars, who had been sent up in support, drove off the Germans by fire from the wood on the left of the village. British losses: 1 officer, 2 men killed, 2 officers and 5 men wounded. The German losses are reported as being very heavy.

It must be reiterated that the cavalryman, even in the fire fight, should not lose sight of that most important thing, his mobility. He is a poor cavalryman indeed who dismounts his whole force and sits down to overcome the enemy by a purely frontal attack. By the detachment of

two or more mounted bodies he can feint an attack on one of the enemy's flanks or rear and drive home a real attack on another flank or the rear. It will, in many cases, be advisable to consider the frontal action purely a holding attack. The frontal attack compared to the flank attack is likened to the difference between a weight held in the hand and the same weight at the end of a horizontal stick.

In the attack of localities it is necessary to keep out both a mounted and dismounted reserve, the former for the offensive and the defense of led horses, reconnoitering, etc., the latter to press home the dismounted attack.

The passage through a defile or a heavily wooded road should never be undertaken without throwing forward a few troops to hold the far side by fire and prevent an attack on the necessarily closely formed bodies as they emerge.

In minor operations the fact must not be lost sight of that speed on horseback is not the only advantage in cavalry mobility. A cavalryman should be faster on foot for two reasons, first that he is not encumbered with the weight that a foot soldier carries, secondly that his leg muscles are fit for extended effort after he has traveled many miles on horseback. Advantage can be taken of this in minor tactical operations to outflank opposing bodies. In the recontre a swift dismounting and rapid occupation of a strategic point will win against superior numbers time and time again. The essence of cavalry work is speed and this should be remembered in dismounted operations as well as mounted.

To secure the fullest effect from surprise, it is necessary to act swiftly and resolutely with no hesitation in advance or withdrawal. The work of Jeb Stuart in the

Civil War is one of the finest examples of combined fire, shock and surprise action.

Another interesting example of the cavalry fight is offered by the 5th Cavalry Brigade (Chetwode) when covering the rear and right flank of the First Corps in its retreat. On August 28th the pursuing German horsemen came into touch with it near Cerizy. At about five in the evening three squadrons of the enemy advanced upon one squadron of the Scots Greys which had the support of J Battery Royal Horse Artillery. The Germans were fired upon, dismounted and attempted to advance. The fire was so heavy that they could make no progress and their led horses were stampeded. They retired, still on foot, and were followed up by a squadron of the 12th Lancers on their flank. The remainder of the 12th Lancers, supported by the Greys, rode into the enemy, killing or wounding nearly all of them with the sword and lance. A section of guns had meanwhile been firing over the heads of the party into a supporting body of enemy cavalry, who retired, leaving many dead and wounded behind them. The British lost only 43 killed and wounded. The enthusiastic cavalrymen rode back between the guns of the horse battery exchanging cheers with the gunners and waving[1] their blood-stained weapons.

In war, generally, and in the cavalry combat, particularly, indomitable energy is the secret of success. Plans once undertaken should be pushed through in spite of all obstacles. Success in war is after all largely a matter of character, both upon the part of the nation as a whole and upon the part of the leaders. The distinction should be made between indomitable will and stubbornness. The

[1] The British Campaign in France and Flanders, Doyle, page 121.

stubborn leader is very liable to act upon preconceived opinions which arise very easily in war. A preconceived opinion is a thing to be avoided as it leads inevitably to a biased interpretation of reports, as the leader sees only those reports that confirm him in his mistaken theory and disregards the others. This will lead to faulty and dangerous dispositions. The mind must be kept open until there are enough data to form an opinion, after which the plan should be formed and pushed through in spite of all difficulties.

CHAPTER XI

RECONNAISSANCE—AIR SERVICE AND CAVALRY

In line with a great many hasty judgments, the aeroplane has been slated to supplant cavalry in the field of reconnaissance. This has even been believed by cavalry officers themselves. One of the first effects of the appearance of any new type of fighting machine or of any new method of warfare, is the claim made by its partisans and taken up immediately by journalistic laymen, that the innovation will supplant all previous measures anywhere remotely allied to its functions. This was true of the tank, of the submarine and especially true of the aeroplane.

The aeroplane was to be the cavalry of the future. It was not only to perform all the reconnaissance functions of cavalry but was to perform its combat functions as well and perform them better. These imaginings have of course been tested by reality and as a result the aeroplane has been assigned to its proper place in the tactical scheme of things.

There still remains, however, a lingering impression that the aeroplane has supplanted the cavalry in that very important sphere of duty, reconnaissance. This impression is very strong in the mind of the laymen and also in the mind of that type of officer who is willing to accept any dictum except study and analysis.

A careful analysis of the capabilities and limitations of the aeroplane leads to some rather illuminating conclusions. The first conclusion is that it would be extremely unwise to relegate cavalry to the limbo of forgotten things in view of the many manifest limitations inherent in air reconnaissance.

These limitations are so important that they make entire dependence upon the air service for reconnaissance a dangerous experiment. The following are some of the factors that militate against successful air reconnaissance or that will militate against it in future wars.

(*a*) Hostile control of the air.
(*b*) Unfavorable weather conditions.
(*c*) Present and future possibilities of anti-air craft defense.
(*d*) Present and future possibilities in concealment and camouflage for troops.
(*e*) Night operations.
(*f*) Inability of the aeroplane to take prisoners, examine dead and wounded, judge of enemy morale, etc.
(*g*) Lack of continuity of observation.

(*a*) The danger of an army depending entirely upon air reconnaissance can be clearly brought home by simply considering the possibilities attendant upon the loss of air control by our own side. This happened on the Western front several times. Its results were not so marked owing to the stationary character of the fighting. It happened upon the Eastern front with disastrous results to the loser. It happened on the Palestine front. This is an excellent example as the losing side not only lost the control of the air but were woefully deficient in cavalry to repair the loss.

Before the great attack of September 18th and 19th, 1918, on the Turkish lines north of Gaza the Turkish air force was almost *hors de combat* owing to the supremacy of the British. On the 15th their reconnaissance reported, "Some regrouping of cavalry units in progress behind the enemy's left flank apparently, otherwise nothing to report." At this time three cavalry divisions, five infantry divisions and a major portion of the heavy artillery of the force, were concentrated behind the left flank and between Ramleh and the front line of the coastal sector. There were 301 guns concentrated instead of the 70 that were normally there. The unobserved massing of these forces led to the successful attack and overwhelming defeat of the Turkish VII and VIII Armies.

The state of the Turco-German air forces can be gathered from the following extract from their captured records: "From August 25th, 1918, to August 31st, 1918, in consequence of lively hostile flying activity, no reconnaissance could be carried out." For a period of seven days, at a most important time, the Turkish air force was unable to function. Many such periods occurred in this campaign in spite of the excellence of the German airmen and their machines. The Turks had no cavalry in numbers or quality to make up for this failure in their air forces. They were blinded, they lost tactical freedom and the initiative passed from them.

The above example is cited to show what happens to an army that places its full dependence upon aerial reconnaissance to the exclusion of cavalry reconnaissance. It must not be forgotten that another serious danger that results from a total dependence upon the air service is the fact that even a great and efficient air service may be rendered useless shortly after the outbreak of war by the

appearance of some new invention or improvement adopted by the enemy. It might take weeks and months to develop a corresponding strength on our own side. In a war of movement we would be blinded through this period. If, in a war of the future, it takes us as long to put an air force into the field as it did in the last war, it behooves us to have a force for this purpose that will be ready to move out at once and function immediately —a force of cavalry.

(*b*) Unfavorable weather conditions, especially the ones that affect visibility, would render an air force useless at certain periods. This happened in many cases in the World War. A notable example, on the Palestine front, occurred in the period of three days after December 7th, during the progress of the converging movement upon Jerusalem. Heavy rains and mists prevented the air force from observing. The British carried on with their cavalry—the Turks, without cavalry, were helpless.

(*c*) Present and future possibilities of anti-aircraft defense. This is another form of the old controversy, "shells *versus* armor." The development of anti-aircraft guns at present is advanced enough to warrant that any force sufficiently supplied with them and trained in their use, can keep the aeroplanes so high in the air that the information gained by them is almost negligible. During the later stages of the Palestine campaign the British anti-aircraft defense had so improved as to achieve just this purpose. It is not believed that the possibilities of the anti-aircraft gun have been nearly exploited as yet. Their efficiency is of proved worth now. The next war will see even greater effects produced by them. It is only a question of time until most branches will be armed with them and trained in their use.

(*d*) Concealment and camouflage for troops. The value of aeroplane reconnaissance is nullified to a certain extent today and will be rendered of less value in the future owing to the present knowledge and future possibilities of the art of camouflage and concealment of troops. Troops trained in this and practicing its principles will be able to render much more difficult the work of the air reconnaissance. The combination of a high degree of camouflage and concealment with an efficient service of anti-aircraft guns has already been put into operation with successful results. There are large possibilities for the future improvement of this phase.

(*e*) Movements of troops at night will go practically undetected by the air reconnaissance. Granted that aeroplanes can fly at night, what is the good of flying if they can see nothing? Cavalry can perform this duty—restricted naturally to security reconnaissance—it can hold ground and prevent the movements of the enemy or give warning of his approach. It can seize commanding points of observation and establish effective screens.

(*f*) Inability of the aeroplane to take prisoners, etc. From the viewpoint of the Intelligence officer, the aeroplane only brings back a small part of the needed information. It cannot supply the important information gained from prisoners, it cannot take prisoners, it cannot identify enemy units and in many cases cannot even identify enemy branches of the service. It cannot give information leading to deductions as to the state of enemy morale. It cannot examine enemy dead and wounded, capture documents, search telegraph offices and examine post offices, civilians, etc. In other words, it cannot supply all the thousand and one small bits of information needed to provide the army command with working

knowledge of the enemy. This rôle will be of paramount importance to the army in a war of movement as it has been in the position warfare on the Western front. It could be carried out there by dismounted troops. In any war of movement it must be carried out by mounted troops.

(*g*) Lack of continuity of observation. The aeroplane cannot hold a force long enough under observation in many cases to determine its intentions. Its reports must of necessity be based upon exceedingly fleeting glimpses, insufficient in most cases to warrant any tactical action.

In addition to all the above mentioned points the aeroplane cannot hold ground. Its offensive power is not great enough to exercise any decisive effect upon the course of battle. On water the problem of naval construction is to balance the three factors of speed, armor and guns. One cannot be increased without corresponding loss in the others. The same problem applies to the aeroplane. The desire for speed in the aeroplane has led to the sacrificing of its offensive power. The sum total of the results of all the improvements in the air service during the world war was to add equations to each side which balanced and neutralized each other. The war went merrily on on the ground while the opposing air fleets fought for mastery.

Dramatic battles in the air were very spectacular but the professional soldier wishes to know what tactical results were gained by these battles. It was predicted that the air service was to end surprise as a factor in war. On the contrary the World War was replete with examples of surprises on a vast scale. To mention a few of the greatest, there was the German offensive against the Russians in the spring of 1915, the German offensive

against Verdun in February, 1916, the withdrawal of Hindenburg to the new line of defense in the spring of 1917, the Austro-German offensive against the Italians in October, 1917, and the German offensive on the Western front in March, 1918.

Enough has been said to prove that dependence upon the air service as the sole reconnoitering force is dependence dangerously placed. The air service has too many disadvantages to be the sole dependence for the service of security and reconnaissance. The problem now is to assign the aeroplane to its proper place in the tactical scheme of things. In the field of reconnaissance that place is in close cooperation with cavalry. The study of means for closer cooperation should be undertaken with a view to utilizing the many manifest advantages of the flying service. Studied properly, as an auxiliary to cavalry in this field, there is room for limitless possibilities for the mutual improvement of both services.

One of these possibilities is a fuller exploitation of the mobility of cavalry. A higher degree of development of the air service will inevitably tend to render more unusual the factor of strategical surprise. Major dispositions of the troops on each side will be known to the opposing side. The only possibility of success in many cases will be the possibility of moving troops to a selected point of attack at greater speed than the enemy can move troops to repel them. This will render increasingly important the rôle of cavalry. It will find its fullest development in this type of operation in working with its air forces. The determination of points of attack and the picking of routes as well as the strategical security will be the function of the air forces.

It is in the field of strategical security that the air force

can aid cavalry to a material extent. The limitations of the air service make it of doubtful value in the field of tactical reconnaissance. In the realm of strategic reconnaissance it will hold full sway. Its work will take an enormous burden from the cavalry. The air service will find its rôle in sketching the broad outlines of the picture. The cavalry must fill in the details. The handing over of strategical reconnaissance will result in much saving of horseflesh to the cavalry. It will save it much dispersion. It will allow it to keep its strength more or less intact for battle purposes and will allow it to concentrate more thoroughly in the field of tactical reconnaissance.

Nevertheless we must not blindly turn over all the duties of strategical reconnaissance to the air force. The possibility of the defeat of the air force must not be lost sight of. It is a fragile arm. Being a mechanical innovation it is subject to the possibility inherent in all mechanical innovations in war—the possibility of being neutralized or effaced by new and superior mechanical innovations. For this reason the cavalry officer must study and understand the requirements of strategical reconnaissance so as to be prepared to take over such duties if called upon.

Many lessons have been learned in the World War as to the tactical cooperation of the air service with immobile forces. The subject that now requires study is the subject of cooperation of aeroplanes with highly mobile forces. One phase alone of this study needs attention, the question of means of communication between the aeroplane and the rapidly moving cavalry troops on the ground. This subject presents problems for solution that were not solved satisfactorily in the World War.

In line with the above arguments it is interesting to

note the opinion of the great cavalryman developed by this war—Field Marshal Allenby. He has this to say in his article in the *American Cavalry Journal* of January, 1921, "In the task of strategical reconnaissance, cavalry has in a great measure been displaced by the recent development of the Air Service. Distant reconnaissance is carried out infinitely more expeditiously and more efficiently by aircraft than by horsemen. This effects economy in horse power and in man power and the cavalry is thereby saved for its ever important duties of tactical reconnaissance and battle.

"Tactical reconnaissance, including the keeping of touch and the filling of gaps in the long front of the present day battlefields, is still the business of the horseman.

"The battle value of cavalry increases with the breadth of vision bestowed by aircraft. The Air Service, by enlarging the horizon, renders possible such bold strokes by masses of horsemen as were seen in Mesopotamia, Palestine and Syria."

CHAPTER XII

CAVALRY RECONNAISSANCE, PATROLS AND SCOUTS

To secure the best results in cavalry reconnaissance the army commander must know and must state to the cavalry what information is desired. The broad order to discover the position and intentions of the enemy is all very well, but that is the cavalry duty in any case. What must be done if the best results are to be obtained, is to state exactly what information is desired; whether the enemy is at a certain place; whether certain bridges are or are not destroyed; whether the enemy is advancing upon certain roads; whether given towns are occupied; how far the flanks of the army extend, etc. Such clear and definite orders will bring in clear and definite reports.

In all tactical operations it is not only necessary to seek information but it is necessary to know what information to seek. Napoleon's superior information was mostly due to the fact that he sent his cavalry on a definite mission to secure definite information. As far as the higher command is concerned, it is simply a question of having a plan of action mapped out and of seeking the special information that will aid or hinder this plan. It implies a knowledge of the art of war. Without a foundation of the principles of war the officer seeking information is working in the dark and at haphazard. He is unable to assess correctly the value of the infor-

nation that he does find. With a knowledge of war he is enabled to narrow the field of endeavor and to concentrate upon the probabilities of the situation.

The mobility of the cavalry enables it to anticipate events. The intelligence that the cavalry brings is direct evidence of the position and intentions of the enemy. The intelligence brought by cavalry has this advantage over the intelligence gained from other sources; that it is information more valuable from a military viewpoint owing to the fact that it is information gathered by trained observers.

In addition to securing the information there is the necessity of transmitting it. One of the great faults in reconnaissance work in 1870 was the fact that officers were sent out on long missions involving in some cases rides of 60 and 70 miles without any proper arrangements being made for the transmission to headquarters of the information they obtained. Information, no matter of what import, is valueless unless it reaches the higher command.

To further the transmission of information it is of great importance that lines of intelligence be established. This is accomplished by means of motorcycle dispatch bearers, motor cars, light wireless sets, buzzers, pigeons, mounted orderlies or relay posts and telephones. It is hoped that wireless telephoning will soon reach a state where it can be an effective aid to military operations. The first point is to secure the information, the second point is to place that information where it can be utilized.

Reconnaissance zones must be allotted by the chief of the reconnaissance body. These zones must be carefully defined. For obvious reasons an important road should not be used to limit one boundary of a reconnais-

sance zone. In the case of the change of the direction of the enemy or the shifting of the zone of maneuver, new allotment of reconnaissance zones must be made quickly. This is best done by recalling the forces already out simultaneously with the sending forward of new units on the new sectors.

It is necessary, in seeking knowledge of the enemy, to touch him at a number of points, as one piece of information is valuable only in so far as it is supported by other pieces of information. Reports from a multitude of different sources must be in the hands of the army intelligence authorities before a full appreciation of the situation can be distilled and made the basis for action.

The service of reconnaissance must be carried out in an offensive sense. To secure the advantages of superior information it is necessary to move on a broad front with strong supports. The enemy must be pushed back relentlessly with rifle, machine gun, and artillery fire power, and with the combination of mounted and dismounted attack, until his formed bodies are encountered. This will necessitate the overthrowing and the driving from the field of his cavalry.

One duty that will fall particularly to cavalry will be that of making prisoners. This is one of the most important means of gaining information. Every effort should be made to capture prisoners. They must be sent back to examining posts that will be established by intelligence authorities in the rear.

Owing to the importance of information gained from prisoners our own men must be particularly warned of the damage they may commit to their own side by giving any information if captured. They must be told that they will be cleverly cross-examined; they may be put

in confinement with pretended friends who will pump them; they may be subjected to listening devices in their prisons; threats or promises may be made them. They must be warned of all these and of the traitorous action they would commit if they supplied the enemy with any information, no matter how unimportant it might seem.

The soldier must have explained to him the work of the intelligence section of an army staff, how they gather in a multitude of seemingly trivial and unimportant pieces of information from which they construct important facts. For this reason he must not divulge any information no matter how trivial it may seem to him. It may be the keystone to an incomplete arch of knowledge already in enemy possession.

There are three types of reconnaissance—protective, contact and independent. Protective reconnaissance ensures the absence of the enemy and the safety of the command and takes the form of outposts, patrols for limited range work, flank and rear guards, and in some cases, advance guards.

Contact reconnaissance is employed by larger bodies who are prepared to fight for information if necessary. This takes the form of reconnaissance in force, large cavalry bodies with reconnaissance missions and in some cases advance guards.

Independent reconnaissance takes the form of patrols and scouting bodies who have wide discretion granted them, who range very far and who are required to secure information without fighting if possible.

March outposts—the units who protect the marching body when it halts temporarily come under the heading of protective reconnaissance.

Distances in protective reconnaissance should be suffi-

cient to allow the commander of the main body to make his dispositions in case of alarm.

The independent cavalry of an army is the chief reconnoitering force. Its mission is to find the enemy and keep the army commander informed. To achieve its reconnoitering mission it must fight a way through the enemy screen and identify formed bodies.

It is necessary clearly to define the mission of any detached body—i. e., whether the leader is engaged in a reconnaissance in which he may find opportunity to damage the enemy or whether he is engaged in a tactical operation in the course of which he may pick up information.

The boldness of patrols works to deceive the enemy. The same effect is gained also by the use of exaggerated numbers. It is often advisable to use a cavalry force as a screen for demonstration purposes while the main attack is developed elsewhere. Ashby, the leader of Stonewall Jackson's cavalry force, was very skillful in this use of the cavalry and succeeded in keeping the enemy in doubt as to whether his force was strongly supported or not.

The attitude of inhabitants has a strong influence upon reconnaissance duties. In hostile countries much larger patrols with much stronger supports must be used than is possible amongst a friendly population.

Outpost patrols in front of the lines are not very good, not only owing to the fact that they are often mistaken for the enemy and useless alarms occasioned thereby, but because of the fact that they tend to lessen the vigilance of the outpost lines who place an exaggerated value on the security afforded by them. Patrols on the flanks of the force are not open to the same objections.

The whole idea of advance guard reconnaissance must be based upon the necessity of securing tactical information. Information and security are synonymous terms. The value of the advance guard depends greatly upon the quality of the reconnaissance work, even to a greater extent than upon its fighting power. Information that can lead a commander to a correct decision as to when to attack and where, is of untold value.

The advance guard duties, especially in the cavalry, should be carried out in an offensive spirit. A "normal" advance guard formation is about as ridiculous as a "normal attack." The wedge-shaped formation usually adopted as the last word in advance guard formations is purely a defensive formation. The offensive advance guard should have observing parties well forward on its flanks and move on a broad front. This acts also as a screen.

The principle of keeping one's intentions from the knowledge of the enemy is violated by the use of the wedge-shaped formation; any intelligent military observer knows immediately that this is an advance guard formation, and that the main body is close behind. Furthermore, upon the rencontre it is necessary to observe the enemy's main body as quickly as possible. There can be no doubt as to the superior ease of observation from the patrols on the flanks of the line formation as compared to the same observation attempted from the wedge shaped formation.

The commander of a smaller cavalry detachment such as a contact squadron, a large patrol, troop or other body would do well to keep the direction of the scouting in his own hands. With a fixed formation, the security of the column is left to the individual intelligence and energy

of one or more troopers on the flanks. They are very prone to disregard strong points that might possibly shelter an enemy. A better plan is to send out successive units to search designated points and then return to the column. This can be done without slowing up the march by sending these units far enough in advance, watching for their signals and then sending out the next trooper or troopers before the return of the original ones. It might be called "patrolling by successive loops."

The reconnaissance on the part of a retreating force must extend well to the flanks and well forward, as the enemy invariably will attempt to pass the rear guard and hit the flank of the main body.

The cavalry screen is employed to conceal tactical or strategical movements from enemy observation. It is not, as it is often described, a "cloud" of cavalry. It is the advance on a broad front of a line of strong groups, each covering its sector by patrols. Basically it consists of a line of groups in observation and a line of supporting groups, with also a line of reserves. Good communication laterally and in depth is essential.

An advance guard, considered offensively, should not rest content with simple protection of the main body. This is only the securing of negative results. In war you must strike the enemy and deliver your blows on his formed bodies. Therefore the purely negative idea of simple protection of the main body must be supplemented by reconnaissance measures of sufficient value to insure prompt enough information to permit the attack being launched quickly and effectually. This information must be of such nature as to permit your own commanding officer to reap full advantage of the element of surprise and to take swift and resolute action against the enemy.

The principles of effective screening and reconnaissance are a broad front, strong supports and concerted action. There is nothing incompatible in the necessity of extension on a broad front and the tactical necessity of combined and concerted action. This is only the application of one of the principles of war, the principle of the economy of forces. Effective reconnaissance requires width of front while successful tactical action requires depth of formation. The happy combination of these two is the indication of a skillful leader.

The value of negative information must be impressed upon all subordinates. It is just as important for higher command to know where the enemy is not in many cases as it is to know where he is. It is also a check on the presence and activities of the reconnoitering detachments and assures the commander that all fronts are being covered.

In sending out patrols with two missions to perform, instruct the leader as to the more important.

The highest type of reconnaissance is that where the leader is told what is wanted and left to choose his own means. Wellington in the Peninsular campaign was particularly noted for the excellence of his service of information. This was his guiding principle.

Do not, when approaching a retreating enemy, do so directly from the rear where he has a rear guard but strike in on a flank where he does not expect you.

When a large force is despatched on a contact mission the enemy must concentrate his screening bodies to meet it. Instructions must be given to all our own troops in other sectors to increase their activity in order to take advantage of the corresponding weakening of the enemy forces in their front.

In combined operations with large bodies the reconnaissance should be kept in the hands of higher command to avoid duplication of effort. Failure to do this was one of the faults committed by the German Army in their advance on the Moselle in 1870.

The Scout:

The basis of all cavalry reconnaissance work is the cavalry trooper. In the final analysis the army having the most intelligent and best instructed troopers will produce the highest degree of results in reconnaissance. The cavalry soldier must be trained carefully in his duties. He must learn first of all that the measure of the value of a scout is not the number of moving-picture hair-breadth adventures that he undergoes but the amount of information that he brings back. He must be grounded in military knowledge to such an extent as to insure that his reports will be intelligent and of sufficient value. He must be instructed in the military vocabulary in the recognition and designation of the landscape and must be taught the essentials of tactics. His intelligence, initiative and self-reliance must be fostered.

He must be taught the elements of concealment and instructed that they are simply an application of common sense. Every opportunity must be used by his officers while at drill and on the march to teach him essential points in scouting.

He must be taught the following and shown by practical example:

The avoidance of crest lines, summits, open ground.
Quiescence when stationary, caution when moving.

Knowledge of backgrounds.
Concealment; value of shadow and sunlight.
"Freezing" (Motion meaning life to most observers).
To observe on foot and realize that the horse makes too many motions for safety.
To advance by successive bounds; to make use of a good post of observation before moving on to the next one.
The value of silence, especially in wooded country.
Memory for landmarks.
Looking over the back trail for a possible return in a hurry.
For night operations, sense of direction, the stars, running water, judgment of time and space, wind direction, slopes, hills, roads, fences, danger of smoking, avoidance of crests (so as not to loom up against star or moonlight). The value of transverse lines across the direction of route to check up on map.

Training to seize value of cover, shadow, broken sunlight, small hillocks, depressions, tufts of grass.

The value of blurring the outline (the feather bonnet of the Indian and the habit of the Zulu in slowly raising a small bush over a hill crest before raising his head to look through it).

The danger of disturbing flocks of animals, and the value of watching the actions of flocks of animals, wild birds, etc.

The value of patience..

The avoidance of an appearance of apprehension when discovered. The enemy would rather capture than kill. A sudden sign of alarm or ill-considered attempt to

escape might precipitate a volley where an unconcerned and unsuspicious attitude might lead to an opportunity for escape a moment or two later.

To change direction when out of sight and being pursued.

Never to appear where normally expected. Point of emergence from a wood for example should never be normal exit.

Avoid use of firearms where possible.

To remember that most discoveries are made at the halt. That scouting work resolves itself into picking one good observation post after another and properly exploiting the possibilities of each and a quick and inconspicuous movement from one to the other.

To use field glasses always and whenever opportunity offers.

To look at things from the enemy's viewpoint. As the old sea captain in one of Kipling's stories said, to explain his success in always locating the schools of cod fish, he "thought like a cod."

Observation of tracks in mud and dust and study of the effects of wind and sun upon them. Remember when following a dim trail to look several yards ahead rather than directly on the ground at your feet.

Study the enemy, his usual strength of patrols, outposts, the speed and condition of his horses, his skill, initiative, courage, etc.

Always consider possible line of retreat. Never return by the same route if possible. Remember that snares are always set in runs.

Always have a rough plan of operations ready for any emergency. The danger of surprise is the delay caused by hesitation.

Never enter an enclosure without looking for an alternative exit or a "back door."

In leaving the horse leave him in a position for a quick get away. If surprised by horsemen while on foot move towards wooded or broken ground where it is difficult for horsemen to follow.

Always carry the rifle. A shot or two will dampen the enthusiasm of a pursuer, and make him think that your boldness portends support near at hand.

Train constantly in military fundamentals of knowledge; a civilian scout might be clever but his information would be useless from a military standpoint because of his ignorance of the size of units, branches of service, etc.

Learn the peculiarities of the enemy's footgear, his shoeing of horses, his artillery wagon and motor transportation tracks. Be able to tell whether a large or small force has been on the ground.

An observation of enemy's tracks may lead to the avoidance of an ambush.

Study dust clouds and learn the different forms made by different arms of the service.

Have a unit of estimation for troops and for distances.

Watch for smoke and fire.

Observe and report on enemy's system of protection and its efficiency.

Learn to get second hand information from inhabitants, prisoners, deserters, etc., and to judge of its value from the intelligence or disinterestedness of the person. Consider hostile inhabitants as enemy spies and avoid where possible.

Collect all documents, letters, note-books, scraps of paper and turn them in even if you cannot read them.

Turn in buttons, articles of equipment, etc., for examination by the intelligence officers.

Remember that a live enemy in the form of a prisoner is valuable to the intelligence authorities in the rear.

Do not neglect to report anything unusual that you have seen. Remember that your reports may be amongst thousands that are sifted and gone over, weighed and compared, by trained intelligence personnel and a thing that to you may seem trivial may be of undreamed of importance when added to other facts.

Maps should be understood and the scout should be able to draw rough sketches.

Finally, get your information as quickly as possible to your immediate superior.

The Patrol:

A patrol leader is valuable according to the degree of tactical and strategic knowledge that he possesses. For this reason our younger officers, on whom so much of the actual patrolling work will fall, should be well grounded in the tactics of their own and other arms and should possess a knowledge of the elements of strategy. This applies to non-commissioned cavalry officer as well.

Before starting on his mission the patrol leader must cross-examine himself and examine his command. He must assure himself that his men and horses are fit, inspect ammunition, food, clothing, shoeing, see that field glasses are in working shape and must instruct his command in their duties and their mission. He must know clearly what information is required, what direction he is to take, whether negative information is desired, where and how he will transmit information to the rear.

There are a few general things that a patrol leader should keep in mind. He must never appear when or where normally expected. He must look on the situation from the enemy's viewpoint in order to gain an insight into the enemy's probable course of action. He must never get into a situation with no means of exit. He must remember that the more decisive the direction in which one moves the greater is the probability of encountering the enemy. In hostile country he must conduct himself as though surrounded by legions of spies. If pursued, he must remember that there is no pursuit so enthusiastic as that of defenselessness. He must keep a sting in his tail, remembering that a well-placed rifle shot or two will considerably dampen the ardor of pursuit.

When in doubt he must take the offensive. An illustration of this was the action of a Prussian lieutenant, von Papen, who, with his patrol of 15 men, in 1870 was pursued by a French party of some 30 men. He found himself confronted by a stream. Three of his horses refused to jump. To avoid having them captured he turned, recrossed the stream and charged the French party, taking them by surprise and driving them off with loss. The report of this event, brought back to the French General, Ladmirault, caused him to deploy his whole corps the next day, imagining that such boldness could only mean the presence of large enemy bodies in his vicinity.

To have the enemy arrive on the scene simultaneously with the arrival of the news of him is a situation that very often arises. It is an indication of poor performance of reconnaissance duties.

When reporting his information, the sending officer must remember that it is as difficult to draft a good

report as it is a good order. Clearness and brevity make the soul of a report. It must always be examined by the sending officer in a detached way in order to visualize the information from the receiving officer's viewpoint.

Every document of any possible value must be examined and sent in. This applies to newspapers, notebooks, and practically any piece of paper containing any writing in the enemy language. Von Kluck, in his march through Belgium with the First Army, gained much valuable information of the movements of the English army through scraps of letters and notebooks and parts of orders picked up on the roads and fields and from dead and wounded men and prisoners.

The principle of successful patrolling is to survey ground thoroughly before moving over it, using the field glasses to cover it carefully. Remember in using field glasses to divide the area to be observed into some sort of sectors, systematizing the work and leaving no place uncovered. In positions in observation have one man as observer, dismounted, with the rest of the men and horses concealed.

Before starting on a patrol it is necessary to fix on a few signals. There should be one, for instance, for the commander to assemble his patrol, another to enable the commander to call in a flanker, another for flanker to call the commander to observe anything suspicious. It is necessary to have the patrol formation elastic. For this reason a formation in line is the best. In addition to ease of control and to the greater extent of terrain covered, this formation gives the commander an ability to swing a flank through a dangerous place without risking his entire patrol. This will also frustrate enemy attempts at ambush.

One man must be kept so far in rear that he can make a "get away" in case of surprise and capture. Remember it is easier to capture a man by waiting for him than by chasing him. This necessitates an ability to see before being seen. One principle of all reconnaissance is to discover the enemy before the enemy discovers you.

In making movements remember that the regular recurring movement most quickly catches the eye, especially in imperfect light. A quick movement of the whole force over exposed ground may be unobserved. There is less danger in swift movement than in slow, as even if discovered and fired upon it disturbs the enemy and lessens his aim.

In reporting upon ground it is necessary to study it from the viewpoint of higher command. Remember that a sketch or map tells much more than a statement. Strive for useful maps and sketches instead of merely artistic ones.

Attempt must be made to gain information from inhabitants. In hostile countries great care must be used in this. In questioning a civilian, consider the man's intelligence and status in life, find out his business and what his viewpoint or his special knowledge might be. It is a safe plan to avoid hostile inhabitants, considering them as part of the enemy forces. In sending in information, separate what you have heard from what you have actually seen.

Everything unusual must be reported, no matter how irrelevant it may seem. Small articles of enemy equipment must be sent back for examination. Information that will lead to the determination of the state of the enemy morale will be of value. The finding of a great

many articles of equipment is one means of judging the state of enemy discipline.

Keep constantly the object and the mission in view. Attempts to capture prisoners, to fight enemy patrols, and to capture trophies must not interfere with the main object, which is to gain information. An example of poor patrolling work is furnished by a Lieutenant Ramin of the Prussian cavalry. On August 8th, 1870, he reported the location of an abandoned enemy camp, but made no mention of the size of it nor of the direction in which the enemy left it; he pursued a hostile patrol a long distance instead of a sufficient distance to determine that there were no formed bodies in the rear of it and completely forgot his mission in this pursuit.

If a patrol leader finds important traces of the enemy in a direction different from that to which assigned he must split his patrol.

The enemy is best observed while on the march. Marches are usually undertaken in the morning. The enemy is usually in camp or bivouac in the evening which makes the task more difficult. For this reason patrols must start early. Patrol leaders should make their plans in the evening for the following day if practicable. They should study the map of their sector until they have it learned by heart.

Remember the value of negative information. If there is certain indication that the enemy is not in a sector to which the patrol is assigned the leader must continue, sending back negative reports meanwhile and must above all not encroach upon territory assigned to another patrol.

Upon the rencontre, or surprise meeting with an enemy patrol, take the immediate offensive, first being sure that

the patrol is not the point, or advance party, of a larger body. Arrange an ambush if possible. This is another advantage of seeing the enemy before being seen. Every success of this nature increases the moral superiority of your own men. If it is impossible to care for prisoners they can be rendered harmless by being deprived of horses, arms and shoes.

In forward movements the patrol leader must call the attention of men to road forkings, lookout positions, and in general, have the men study the back trail. This will facilitate the progress of messengers returning with reports. It is best to acquaint men with the contents of any written messages they carry so that, when in danger of capture, they can destroy them and still report if they succeed in escaping.

Do not send single horsemen long distances in hostile country. In case of important information send a reporting patrol of 2 or 3 men. The strength of a patrol for this reason should be based on the number of messages it is expected to send.

Reconnaissance has not attained its objective until the main bodies of the enemy have been located and reported upon. These reports must be complete. To state that a "party" of the enemy was observed is a waste of time, paper and horse flesh. What is wanted is a report on the numbers of the party, their branch of the service, their tactical significance and any other points that can be of value.

In hostile countries it will be necessary to move with stronger patrols. Instruct your men that, when pursued, they should never return directly to the hiding place of the patrol, thereby disclosing it to the enemy.

If your patrol is pursued never lead the enemy directly back to the support. The wisest plan is to disperse and re-form at some point previously designated.

In advancing a man to investigate a dangerous point cover his approach with the rifles of the rest of the patrol. It is hard to hit a mounted man moving rapidly but it would be especially difficult if the enemy himself is being fired upon. In approaching hills or elevations in which the enemy's presence is suspected remember there is usually "dead ground" at the base of the hill. This is the place to change both gait and direction. If the presence of the enemy in concealment is suspected but he refuses to disclose himself, one method is to return nonchalantly in the direction from whence you have come and when out of sight dismount, creep back and observe with glasses. This will very often result in finding the enemies' heads bobbed up.

The patrol commander should have rank and experience sufficient to make his reports of some value. He must state all information in any way bearing upon the strength, arm of service, intentions and dispositions of the enemy. To deduce these things he must be familiar with military practice and procedure. The more knowledge that he has of the art of war the more valuable will he be as a reconnoitering agent.

If he is in hostile country and does not speak the language he must have an interpreter with him. One advantage of our army is the ease with which it is possible to locate an interpreter amongst the enlisted personnel.

It may be advisable to send out an escort, part way, with a patrol, to establish a sort of advanced base or message center. This escort may leave relays or communication posts behind it.

Patrols sent out with a protective mission to accomplish must fight. Purely information patrols must avoid combat unless it is necessary in carrying out their mission. Young and active patrol leaders too frequently are spoiling for a fight to the extent of forgetting that the fight is only a means to the end and that their mission is to gather information.

An electric flashlight is an indispensable portion of a patrol leader's equipment, to enable him to read and write messages at night, to examine maps, etc.

The patrol leader must start out with the most complete grasp possible of the general and special situation to permit him to act intelligently.

The patrol leader should see for himself whenever possible. This applies to the cavalry officer in any situation.

Night Operations:

The patrol at night should work dismounted. The men should be well closed up so as to be able instantly to conform to the movements of the leading man. It is desirable to have oral communication between all parts of the patrol. Signals must be fixed upon in advance. It must be remembered that sound is more audible in the silence of the night than in the day time.

It is important not to lose contact with the enemy at night. On the night of August 6-7th, 1870, von Bredow's Brigade lost all touch with the V French Corps which slipped away through the mountains and formed a junction with MacMahon's Army. All touch with the enemy on this flank was lost for days.

The service and practice of night patrolling is a very important subject of training for cavalry in peace time.

For finding the way across country at night study the map beforehand and figure out the directions of rivers or streams, the slope of the ground and its direction; roads, fences, etc., are all helpful in keeping the direction or in checking up on it.

Every effort should be made to give the horses all the rest possible at night. A horse is useless or nearly so for night patrolling. Select a resting place for the patrol where the avenues of approach can be guarded. Horses must be unsaddled and the unit guarded against surprise. It may be necessary to retire with the bulk of the patrol leaving one or two men in observation, dismounted. Their horses can be tended by the remainder of the patrol and brought up by them in the morning. The patrol must not retire so far as to necessitate a long march to recover the lost ground. In friendly countries stay in the larger villages, in hostile countries avoid villages.

The Transmission of Information:

Every means must be used to get information back where it can be used. Telegraph and telephone lines, buzzer, aeroplane-dropped messages, motor cycles, pigeons, mounted messengers, automobiles, wireless and all other means that can be found should be utilized.

It should only be necessary to get the information back to the advanced troops. It must be cared for by their intelligence personnel and forwarded.

Information intended both for other troops and for higher authority must be noted as having been sent to other troops, "copies to C.O.'s 1st and 2nd Squadrons." This will avoid having higher command receive several messages of the same import which might exaggerate the

importance of the original information. Keep a record of all information sent.

Patrol leaders and messengers must transmit all information to neighboring units and to all officers met, telling them to whom they are transmitting the information.

The ordinary channels of information are from subordinate to superior. If there is a certainty of a more rapid transmission than this, use it, notifying all intermediate commanders of the information. Give information to the first fresh troops met "for transmission." The officer or non-commissioned officer receiving it immediately becomes responsible for its proper transmission. The task of the messenger is not finished until he has checked its final arrival.

Urgent information should be sent immediately to higher command. This should not be done unless absolutely necessary and then should be followed by transmitting it through the customary channels.

Reports must be carefully made, separating opinions from facts. They should be condensed and brief to facilitate their transmission by wire or wireless. The number of the report should in all cases be noted thereon as well as the place, date and time, and name or designation of the sending detachment.

It is important that the statements of inhabitants are not sent back as facts. The information coming from untrained observers should be accepted with caution.

In sending important information when there is no other means than mounted messengers send it by several men, preferably taking different routes.

CHAPTER XIII

NOTES ON FOREIGN CAVALRY

British Cavalry:

The British cavalry operating in Palestine consisted of Australian and New Zealand forces and of British Yeomanry. The Australian and New Zealand forces were, properly speaking, at the commencement of the operations, mounted infantry. They were armed with the rifle and bayonet. The Australian Light Horse Division was afterwards armed with the sword and instructed in its use. The tendency of these Colonial troops was to develop more into cavalry as time went on.

The British Yeomanry was armed and equipped like the British regular cavalry. The Yeomanry corresponds somewhat to our National Guard.

The British brigades consisted generally of three regiments, of three squadrons each; the squadron was divided into four troops of some twenty-four men each. This makes a British squadron slightly larger than one of our troops, their regiment slightly larger than one of our four-troop squadrons with corresponding differences up to and including the division.

Mounted Attack Formations

At the beginning of operations the Colonial troops charged with the rifle on the back and the bayonet held

in the hand on several occasions. As noted above a large proportion of them were later armed with the sword. This was by their own unanimous request. The Colonial troops had the single rank formation.

The Yeomanry troops attacked with the sword. They had the double rank formation. The mounted attack was usually made with two squadrons of the regiment in the first line and the third squadron in the second line. The same formation was adopted in the brigade, the attack being made with two regiments in the first and one in the second line.

Dismounted Attack Formations

The attack, dismounted, was made by the squadron in four lines. With the Australians and New Zealanders each line consisted of one troop, with the troop leader and an automatic weapon in the center of each line. In the Yeomanry the attack was also made in four lines but the troops had extension in depth, the first and second troops taking the right and left halves respectively of the first and second lines, with the third and fourth troops taking the right and left halves respectively of the third and fourth lines. In both cases, the squadron commander took his place in the third or fourth line.

Each troop had from 18 to 20 men in line. There was very little signalling after the action started, the main dependence being placed on the cooperation of all leaders in the carrying out of the instructions received before the commencement of the action.

The advance by rushes was not considered of any value. The advance was made at a walk, moving rapidly on the objective, the men neither halting nor lying down unless forced to do so by excessive losses. They closed

up on the enemy with the bayonet. (All mounted troops in the Palestine campaign were armed with the bayonet.)

The majority of the attacks were made after good preparation by rifle, machine gun and artillery fire. Attacks were organized in depth with as few men as possible attacking directly.

Great stress was laid upon personal reconnaissance before entering the attack. The brigade commander, with his three regimental and his machine gun and artillery commanders, would make a careful reconnaissance. The troops were kept under cover until all plans had been made and orders issued. The second in command of the brigade brought the troops forward on the completion of this preliminary survey. The success of the operations was, as a whole, due to the care with which this preliminary reconnaisance was made. This was followed by care in the issuing of orders and instructions to the subordinate commanders.

Led horses were cared for in a manner very similar to ours. They were seldom immobilized, however, (coupled or circled), owing to the danger from aerial bombing or machine gun attacks.

The Proposed British Cavalry Division

The trend of thought in British cavalry circles can be seen from the recommendations of a recent board of general officers convened by the British War Office to make recommendations for the future organization of the cavalry division.

These recommendations specifically left out of consideration any possibilities of trench warfare. It was stated that special equipment for this possibility was considered

wasteful, believing that any need for this type of equipment could be met by higher authority at the time the need arose.

They recommended that mixed brigades be done away with and that the cavalry brigade contain nothing but cavalry, the auxiliaries being kept under control of the division. It was noted that the highest degree of cooperation was necessary between the cavalry and these auxiliaries but that this cooperation could best be secured directly under the division commander. Special needs or detached service on the part of any of the brigades or regiments could be met by the assignment of the necessary auxiliaries when the occasion arose.

It was recommended that the division of three brigades be adopted because four brigades would be unwieldy and two would not be convenient tactically. For similar reasons the brigade should be composed of three regiments.

The Cavalry Regiment

The underlying idea in the organization and strength of the regiment is the idea of having a unit that can easily be controlled by one man, the regimental commander. It was recommended that it consist of three large squadrons, each of five troops, one of which would be a Hotchkiss Gun Troop. This would distribute the Hotchkiss guns in the most satisfactory manner and would still leave the other portions free and available for mounted or dismounted work.

The personnel allotted to regimental headquarters should be organized as a squadron.

The number of Hotchkiss guns allotted to the regiment

should be 14, at the rate of 2 per headquarters squadron and 4 per fighting squadron.

A troop (fighting) would consist of 24 rank and file. The regimental total would then be 570 of all ranks in round numbers. Personnel required for signalling should form an integral part of the regiment. Stores required for demolitions should not be part of the equipment of the regiment as this work should be left to the engineers. The discarding of the horse bandolier for the carrying of extra ammunition was recommended.

Artillery with the Cavalry Division

The main consideration is to have guns that can keep pace with the cavalry. The British 18-pounder is considered too heavy for this purpose; the 13-pounder, or even a lighter gun, is considered more suitable.

It is necessary to add a proportion of howitzers, this to overcome the opposition of enemy detachments in places where they cannot be reached by the flat trajectoried field guns. The artillery for the division should consist of a headquarters, three 6-gun 13-pounder batteries, and one 6-gun 4.5 in. howitzer battery together with an ammunition column.

The ammunition column should be so organized as to provide three light sections carrying 13 pdr. ammunition and a proportion of small arms ammunition. A howitzer section and a heavy section of G. S. wagons also carrying 13 pdr. ammunition are also assigned. Batteries with a suitable proportion of the ammunition column could be attached to brigades when needed. Each battery should be equipped with two Hotchkiss guns. A light car should be added for the artillery commander of the division.

Machine Guns with the Cavalry Division

While it is necessary to have the closest connection with the machine guns and the cavalry it is felt that this is best attained by keeping the former under the direction of the division, detaching them when occasion requires with detached units. They should be organized into three self-contained squadrons, capable of being attached each to a brigade when necessary.

Each squadron should have twelve guns, which is considered the largest number that can be efficiently handled by one commander. Each squadron should be organized into three troops of four guns each. Each troop would be divided into two subsections.

In the event that machine guns capable of firing armor piercing bullets are adopted, it is recommended that they be attached to the cavalry division in suitable numbers. These should be attached to the machine guns of the squadron and included in the allotment.

Motor machine guns and armored car units should not be included in the cavalry division but should be attached to it when necessary.

The French Cavalry:

Organization

The French cavalry platoon consists of three squads which are each composed of ten men and a corporal. It is commanded by a first or second lieutenant, who has two non-commissioned or *sous-officiers* called *maréchal des logis.*

The squadron is composed of four platoons and is commanded by a captain. Its strength is actually about 110 men.

The regiment consists of four squadrons, a machine gun section of four guns, and a supply section, both commanded by officers. The regiment is commanded by a colonel. The major of cavalry commands one or more squadrons. His position corresponds somewhat to that of our lieutenant-colonel. The cavalry brigade consists of two regiments, commanded by a brigadier general. The regimental officers have all been through the ranks for at least a year's service and then have all been graduated from the Cavalry School at Saumur.

The Non-Commissioned Officer

The French non-commissioned officers are much more thoroughly trained and have more responsibility and authority than ours.

To qualify for the position of corporal (Brigadier) the soldier must have served at least four months with the squadron. He is examined in both theoretical and practical subjects by his officers. These subjects consist of tests in horsemanship, use of arms, both mounted and dismounted, and an oral test in cavalry drill regulations. To be a sergeant of cavalry (*maréchal des logis*) the corporal must have served at least six months in his rank. The examination is along the same lines as the examination for corporal but is more advanced.

After two years' service as *maréchal des logis* he may make application for written examination for entrance to the Cavalry School at Saumur. These examinations are very difficult, including both theoretical and practical subjects. Assistance to men wishing to prepare for this is furnished by the officers who conduct classes in the regiment. If successful in this examination the sergeant attends the school for one year. While there he holds the

rank of *aspirant*. Upon successful completion of this course the *aspirant* is commissioned as a second lieutenant and assigned to a regiment. If unsuccessful he is returned to the regiment from which appointed, with the rank of *maréchal des logis*.

Automatic Rifles

There are six automatic rifles (the Chauchat) carried in each squadron. Two of these are carried in the first and fourth platoons, respectively, and one each in the second and third. The gun crew consists of a corporal and three privates, one as loader, one as carrier, and one to lead the gun horse. The corporal fires the gun. All automatic rifle instruction in the regiment is carried on under the supervision of one officer. The average rate of fire developed is said not to be more than from 20 to 30 shots a minute per gun owing to the frequent stoppages.

Some Tactical Principles of the French Cavalry

The tactical principles that guide the French cavalry are substantially those of the Regulations of May, 1918. They state that rapidity, mobility and capacity for maneuver are the first requisites for cavalry as long as there exists opportunity for march and maneuver. Cavalry must fight. These fights will, in the majority of cases, take place on foot. Cavalry tactics, therefore, must conform to the modern development of fire power. The cavalry must be able to fight on foot unaided, except for the artillery.

The mounted fight, however, must not be lost sight of. Training must be had in preparation for this. Opportunities for the mounted fight will occur when operating

against cavalry, in making or receiving a charge, against shaken or surprised infantry in open warfare, against artillery in column of route, and against the flanks and rear of artillery.

Cavalry is an arm easy to expend and difficult to replace. It must not, therefore, be sacrificed under circumstances that do not allow the use of its special characteristics.

Cavalry dismounted formations must conform to their equivalents in the infantry; the cavalry regiment for example, when dismounted, should correspond to and have equal strength with two infantry companies.

The mobility of cavalry must be taken advantage of even when in the dismounted fight, and attempts must be made upon the enemy's flanks and rear. When the enemy stands firm he must be held by fire while the mounted portion of the command advances against him. The cavalry command is divided into three parts—1st the dismounted portion, 2nd the led horses and combat equipment, 3rd the mounted reserve which can be as large as one-fourth of the whole.

The mounted reserve protects the flanks. It takes fullest advantage of success by throwing elements into the fire fight against the flanks and rear of the enemy. It pursues the retreating enemy and protects the mounting of the dismounted men. It is charged also with maintaining communication with the neighboring units.

The corps and divisional cavalry ensures success in the offensive battle, the army cavalry exploits success. In the defense the cavalry can limit and localize the effect of the enemy's breaking through any portion of the line.

Cavalry must make charges against the retreating infantry and artillery. It must rapidly enlarge points of

irruption by the leading forward of fire units and the use of the automatic weapons against the flanks of the unbroken portion of the enemy forces.

The general rule for the frontal attack of dismounted cavalry units, is, that they shall attack in conjunction with army units carrying many machine guns. These troops must turn against the enemy's flanks and rear. In defense the dismounted cavalry units must protect the advance of reserves and must hold important points on the line of a possible retreat.

The army cavalry has to undertake the duties of exploiting success, magnifying the effect of surprises and the protection of the movements of the army. Rapidity, mobility and its holding power give the army cavalry opportunity to solve tasks which it is impossible for the infantry division to solve with the same speed and the corps or divisional cavalry with the same power. These tasks are the threatening of the enemy's rear, attacks against those portions of the enemy's line which stand firm, reconnaissance and attack against advancing reinforcements and against rear-guard positions, prevention of the enemy's attempts to face again to the front, the holding of positions until the appearance of the infantry, the accomplishment of important demolitions and the capture or destruction of the enemy's provision and ammunition supplies.

It will be necessary to assign with the cavalry such auxiliaries as aeroplanes, light tanks, artillery, infantry and labor units as well as enhanced communication facilities.

Cavalry is warned again and again not to become involved in extensive frontal attacks. It must use its mobility in turning against the enemy's flanks or rear

with fire, at the same time keeping the march or attack direction. It is above all necessary to keep higher leadership fully informed at all times.

Belgian Cavalry:

The Provisional Instructions of May, 1920, for the Belgian cavalry prescribed that tactics for small groups of cavalry should be based upon the cooperation of small combat groups. It provides that each combat group should consist of an automatic gunner, with his weapon, ammunition bearers and riflemen.

The combat group, which is a section (half a platoon) is, according to the regulations, an element in either attack or defense. In the defense, the automatic rifle is used in cross-fire; it serves to defend the neighboring groups echeloned near it, the defense of the group itself being in the hands of its riflemen. These groups, whether in attack or defense, are echeloned. All idea of dismounted attack in line of skirmishers is abolished.

Organization

The section, which is the combat group, consists at war strength of 11 men. The platoon, which consists of two sections, has been adjudged too vulnerable and too cumbersome for maneuver under ordinary conditions of combat. The 11 men are divided into 1 non-commissioned officer, 3 ammunition bearers, 1 horseholder, and 6 riflemen. The latter are, in addition, all armed with hand grenades.

The platoon consists of 32 men at war strength. Of these 22 compose the two sections or combat groups. The remaining men are 1 non-commissioned officer, horseholders, a trumpeter, horseshoer, etc. The trumpeter is

at the disposal of the platoon commander. Horseholders are always Nos. 3 in sets of fours. The mounted formation is so arranged that they shall always be either supernumeraries or specialists such as horseshoers, farriers, saddlers, etc. They are not armed with the rifle.

The regiment on a war footing consists of two groups, each consisting of two squadrons and a machine gun squadron. The brigade on a war footing consists of two regiments and an extra machine gun squadron.

The horse artillery group, of which there is but one in the Belgian army at present, consists of three batteries of four guns each armed with the 75 mm. T. R. Krupp.

The Belgian cavalry is armed with three types of automatic weapons and machine guns, the Chauchat for the automatic rifle, the Hotchkiss, a light machine gun, and the Colt, which is the armament of the machine gun squadrons proper. The first two are the weapons of the combat groups.

Some Tactical Principles of the Belgian Cavalry

It is held that the platoon mounted cannot approach nearer to the enemy than 2,000 meters. Platoons, dismounted, advance in combat groups of two echelons at distances of 50 meters and intervals of 40 meters. They are preceded by patrols at distances of from 100 to 200 meters. This formation is said to be based upon war experience which showed the necessity for attacks in depth. The advance of the reserve waves is made in ordinary line of platoon columns, single file, echeloned at 100 meters distance and 50 meters interval.

Great stress is laid upon the necessity of carefully instructing officers and non-commissioned officers, especially the latter, in the mechanism of the combat group work,

and the necessity of forgetting the old line of skirmishers.

The cavalry attack, dismounted, must always be made in two echelons. In compliance with this, the squadron may be made to attack with two platoons grouped, forming the first two echelons, a third platoon forming the third echelon and the fourth platoon, according to circumstances, acting as either the mounted reserve, a reinforcement for the firing line, as liaison agents or simply as horseholders. When the regiment operates as a whole, the reserve echelon becomes the regimental reserve which would consist of an entire squadron. This is to avoid a series of small local reserve units too widely scattered to be effective.

Freedom of maneuver and the maximum of mobility are the governing rules for cavalry operations. The disposition to resort to dismounted action too soon must be guarded against. This would operate to sacrifice the very essence of cavalry as cavalry, reducing it to the rôle of a mere mounted infantry. The advance, mounted, should be made as far forward as is possible and the dismounted attack only undertaken when further mounted maneuver becomes impossible.

Horse Artillery and Cavalry

The cardinal rule for the guns with cavalry is to fire on sight. The cavalry action should be started with artillery and this fire should not cease. The great fault is not to employ artillery enough. Horse artillery should be prepared to take up positions more rapidly than field artillery and the artillery commander should be given a free hand in his choice of positions for his guns. In these days of long range guns, the position of the batteries is

of no interest to the cavalry commander as long as the artillery can carry out the mission assigned to them.

German Cavalry:

There are no official German dictums upon cavalry available as yet but the trend of thought in German military circles can be judged from the many publications upon the subject printed since the war. Balk, especially, has written an exhaustive essay upon the subject, which essay has been translated and is condensed into some of the following notes.[1]

The German General Staff concluded, as a result of the Russo-Japanese war and the patent inferiority displayed by the cavalry on both sides, that only a first class, highly trained cavalry would be of any value in modern war.

In line with this, the German cavalry was supplied with good mounts and armament. The mounts are criticized by Balk as not being of sufficient hardiness to stand the rigors of campaigning without shelter. The armament was also criticized by him, the tubular steel lance and carbine being considered excellent but the ammunition supply (45 rounds per man) being considered insufficient. The thrusting sabre, carried on the saddle, he does not consider of any proved value as compared to the lance. (It has since been discarded in the new German Army and the lance retained as the "arme blanche".)

As a result of the world war, charges by regiment

[1] "Entwickelung der Taktik im Weltkrieg," Balk, Chapter X, pages 240-258 inclusive.

and brigade are still considered possible but the charge by division is a thing of the past. The Germans felt that their armament with the lance gave them decided superiority over the Allied cavalry and feel that their cavalry had the superior morale throughout. They complain of a too rapid deterioration of horseflesh and of the sacrificing of cavalry units by ill-advised mounted attacks. It is also stated that there were many opportunities for the mounted attack which were not taken advantage of.

The use of cavalry in the battle field is considered to be more difficult than it has been in the past but they concluded that as long as the human factor is what it is, there are still many opportunities to use cavalry mounted in battle.

"There are many charges against artillery which have a strong probability of success, for instance mounted attacks against batteries on the march, surprise attacks against the flanks and rear of firing batteries, against the front of masked batteries, and against artillery unsupported by infantry. It can often be extremely important to silence a battery if only for a few minutes. Ammunition columns are extremely vulnerable to mounted attack."

Shaken and surprised infantry are considered vulnerable to the cavalry attack. "Weapons be they ever so powerful are only so in the hands of men."

It is held that the cavalry of today must be able to fight mounted as well as dismounted and that cavalry must not be degraded to the rôle of mere mounted infantry. Many examples are cited of the decisive effect of even the appearance of cavalry in the world war, especially on the Eastern Front.

It is concluded that the charge is not the sum of all

cavalry tactics. Dismounted action is the most important phase of cavalry duty. In dismounted work, cavalry must be independent of other arms and work without assistance. The increased assignment of fire weapons to cavalry has raised the value of that branch. Cavalry must rapidly drive forward its strong fire power against the enemy's flanks, and other weak points.

Enterprises against the enemy's line of communications are of much more value than formerly, owing to the increased dependence placed by an army on its provisions and munitions from the rear.

Army tasks require a stronger cavalry. Divisional cavalry can be weakened or replaced by cyclists. The army cavalry reconnoiters in combination with air-craft, covers the movements of the army and insures the communications between separate parts. On the encounter of the armies, cavalry must make itself useful against the flanks and rear of the enemy, against important railway centers, must block the enemy's rear guard and must prevent the arrival of enemy reinforcements.

Air reconnaissance completes cavalry reconnaissance when not made impossible by hazy or unfavorable weather. It also gives the general direction to cavalry reconnaissance. The principles already developed in peace time by study of previous wars on all types of reconnaissance, near, distant and battle, have been proved sound. The Germans admit, however, that they used patrols of inferior strength and that they were too confident when operating against the Russian cavalry.

It is stated that the armament with the lance gave their patrols great superiority. It is recommended that wireless units be attached to the reconnoitering squadron. Patrols should always be well supported by these squad-

rons. The contact squadron must have good fighting power in order to break through enemy resistance.

Many examples are cited of successful screening movements and this type of cavalry work is considered of increased value.

Cavalry is considered of great value as a decisive intervening force in battle with fire power. It can come in swiftly with all parts intact and its effect will be decisive.

The fire power of cavalry must be increased by the assignment of a larger proportion of automatics. This, not only to make up for the loss in horseflesh (it is stated that in Courland in 1916 the squadrons of the 6th Cavalry Division could only put from twenty to thirty carbines per squadron on the firing line owing to losses in horseflesh), but to make up for the men absent with the led horses. Every cavalryman must be more than an average good rifleman.

The Germans recommend the assignment of Jäeger battalions to the cavalry division to augment its power. They recommend that men dismounted for any cause be supplied with bicycles and thus enabled to follow the command as a cyclist detachment. They state that this was successfully done in the Italian army.

It is stated that the absence of howitzers and of long range field guns with the cavalry was very often felt. They recommend that not too many calibres be carried with the cavalry division as it tends to confusion in ammunition supply and is too cumbersome.

For the cavalry division they recommend the attachment of one company of mounted engineers supplied, amongst other things, with demolition materials. As already remarked, it is considered indispensable to have the

reconnoitering squadrons equipped with light wireless sets, but the regiments, brigades and divisions should have the heavier sets. There should be a signal detachment in each regiment to handle this.

The Germans unite on the efficacy of cyclist units attached to the cavalry. They state that these were not of such great value on the Russian as they were on the Western front. They unite on the necessity of increased artillery with the cavalry and increased cooperation of the two arms.

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In studying the French, Belgian and German cavalries, the fact must not be lost sight of that they look upon a warfare of position as the most probable form for the next war in which they are likely to be engaged. This, of course, is based upon the geographical and political situation in each case. For this reason the British cavalry is a more valuable study for us than the others mentioned. It is taking into consideration the necessity of all types of warfare on widely separated places on the earth's surface. It also considers the warfare of position as the exception rather than the rule.

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