Tactics in Formation: Challenges of the Marching Army

The French, particularly, have never been able to march steadily in deployed lines. This checkered order would be dangerous in case of an unexpected charge of cavalry. It may be employed in the first stages of the movement forward, to make it more easy, and the rear battalions would then come into line with the leading ones before reaching the enemy. Moreover, it is easy to form line at the moment of the charge, by leaving a small distance only between the leading and following battalions; for we must not forget that in the checkered order there are not two lines, but a single one, which is broken, to avoid the wavering and disorder observed in the marches of continuous lines. It is very difficult to determine positively the best formation for making a serious and close attack upon an enemy. Of all the methods I have seen tried, the following seemed to succeed best. Form twenty-four battalions in two lines of battalions in columns doubled on the center ready for deployment: the first line will advance at charging-pace toward the enemy's line to within twice musketrange, and will then deploy at a run; the voltigeur-companies of each battalion will spread out in skirmishing-order, the remaining companies forming line and pouring in a continued fire by file; the second line of columns follows the first, and the battalions composing it pass at charging-step through the intervals of the first line. This maneuver was executed when no enemy was present; but it seems to me an irresistible combination of the advantages of firing and of the column. Besides these lines of columns, there are three other methods of attacking in the half-deep order. The first is that of lines composed of deployed battalions with others in column on the wings of those deployed. The deployed battalions and the leading divisions of those in column would open fire at half musket-range, and the assault would then be made. The second is that of advancing a deployed line and firing until reaching half musket-range, then throwing forward the columns of the second line through the intervals of the first. The third is the order in echelons, mentioned on, and shown in on that page. Finally, a last method is that of advancing altogether in deployed lines, depending on the superiority of fire alone, until one or the other party takes to its heels,—a case not likely to happen. I cannot affirm positively which of these methods is the best; for I have not seen them used in actual service. In fact, in real combats of infantry I have never seen any thing but battalions deployed commencing to fire by company, and finally by file, or else columns marching firmly against the enemy, who either retired without awaiting the columns, or repulsed them before an actual collision took place, or themselves moved out to meet the advance. I have seen mêlées of infantry in defiles and in villages, where the heads of columns came in actual bodily collision and thrust each other with the bayonet; but I never saw such a thing on a regular field of battle. In whatever manner these discussions terminate, they are useful, and should be continued. It would be absurd to discard as useless the fire of infantry, as it would be to give up entirely the half-deep formation; and an army is ruined if forced to adhere to precisely the same style of tactical maneuvers in every country it may enter and against every different nation, It is not so much.

The mode of formation as the proper combined use of the different arms which will insure victory. I must, however, except very deep masses, as they should be entirely abandoned. I will conclude this subject by stating that a most vital point to be attended to in leading infantry to the combat is to protect the troops as much as possible from the fire of the enemy's artillery, not by withdrawing them at inopportune moments, but by taking advantage of all inequalities and accidents of the ground to hide them from the view of the enemy. When the assaulting troops have arrived within musket-range, it is useless to calculate upon sheltering them longer: the assault is then to be made. In such cases covers are only suitable for skirmishers and troops on the defensive. It is generally quite important to defend villages on the front of a position, or to endeavor to take them when held by an enemy who is assailed; but their importance should not be overestimated; for we must never forget the noted battle of Blenheim, where Marlborough and Eugene, seeing the mass of the French infantry shut up in the villages, broke through the center and captured twenty-four battalions which were sacrificed in defending these posts. For like reasons, it is useful to occupy clumps of trees or brushwood, which may afford cover to the party holding them. They shelter the troops, conceal their movements, cover those of cavalry, and prevent the enemy from maneuvering in their neighborhood. The case of the park of Hougoumont at the battle of Waterloo is a fine example of the influence the possession of such a position, well chosen and strongly defended, may have in deciding the fate of a battle. At Hochkirch and Kolin the possession of the woods was very important. Cavalry. The use a general should make of his cavalry depends, of course, somewhat upon its numerical strength as compared with that of the whole army, and upon its quality. Even cavalry of an inferior character may be so handled as to produce very great results, if set in action at proper moments. The numerical proportion of cavalry to infantry in armies has varied greatly. It depends on the natural tastes of nations making their people more or less fit for good troopers. The number and quality of horses, also, have something to do with it. In the wars of the Revolution, the French cavalry, although badly organized and greatly inferior to the Austrian, performed wonders. In I saw what was pompously called the cavalry reserve of the army of the Rhine,—a weak brigade of barely fifteen hundred horses! Ten years later I saw the same reserve consisting of fifteen thousand or twenty thousand horses,—so much had ideas and means changed. As a general rule, it may be stated that an army in an open country should contain cavalry to the amount of one-sixth its whole strength; in mountainous countries one-tenth will suffice. The principal value of cavalry is derived from its rapidity and ease of motion. To these characteristics may be added its impetuosity; but we must be careful lest a false application be made of this last. Whatever may be its importance in the ensemble of the operations of war, cavalry can never defend a position without the support of infantry. Its chief duty is to open the way for gaining a victory, or to render it complete by carrying off prisoners and trophies, pursuing the enemy, rapidly succoring a threatened point, overthrowing disordered infantry, covering retreats of infantry and artillery.

An army deficient in cavalry rarely obtains a great victory, and finds its retreats extremely difficult. The proper time and manner of bringing cavalry into action depend upon the ideas of the commander-in-chief, the plan of the battle, the enemy's movements, and a thousand other circumstances which cannot be mentioned here. I can only touch upon the principal things to be considered in its use. All are agreed that a general attack of cavalry against a line in good order cannot be attempted with much hope of success, unless it be supported by infantry and artillery. At Waterloo the French paid dearly for having violated this rule; and the cavalry of Frederick the Great fared no better at Kunnersdorf. A commander may sometimes feel obliged to push his cavalry forward alone, but generally the best time for charging a line of infantry is when it is already engaged with opposing infantry. The battles of Marengo, Eylau, Borodino, and several others prove this. There is one case in which cavalry has a very decided superiority over infantry, —when rain or snow dampens the arms of the latter and they cannot fire. Augereau's corps found this out, to their sorrow, at Eylau, and so did the Austrian left at Dresden. Infantry that has been shaken by a fire of artillery or in any other way may be charged with success. A very remarkable charge of this kind was made by the Prussian cavalry at Hohenfriedberg in. A charge against squares of good infantry in good order cannot succeed. A general cavalry charge is made to carry batteries of artillery and enable the infantry to take the position more easily; but the infantry must then be at hand to sustain the cavalry, for a charge of this character has only a momentary effect, which must be taken advantage of before the enemy can return offensively upon the broken cavalry. The beautiful charge of the French upon Gosa at the battle of Leipsic, October 16, is a fine example of this kind. Those executed at Waterloo with the same object in view were admirable, but failed because unsupported. The daring charge of Ney's weak cavalry upon Prince Hohenlohe's artillery at Jena is an example of what may be done under such circumstances. General charges are also made against the enemy's cavalry, to drive it from the field of battle and return more free to act against his infantry. Cavalry may be successfully thrown against the flank or rear of an enemy's line at the moment of its being attacked in front by the infantry. If repulsed, it may rally upon the army at a gallop, and, if successful, it may cause the loss of the enemy's army. This operation is rarely attempted, but I see no reason why it should not be very good; for a body of cavalry well handled cannot be cut off even if it gets in rear of the enemy. This is a duty for which light cavalry is particularly fitted. In the defensive, cavalry may also produce very valuable results by opportune dashes at a body of the enemy which has engaged the opposing line and either broken it through or been on the point of doing so. It may regain the advantages lost, change the face of affairs, and cause the destruction of an enemy flushed and disordered by his own success. This was proved at Eylau, where the Russians made a fine charge, and at Waterloo by the English cavalry. The special cavalry of a corps d'armée may charge at opportune moments.

Either to cooperate in a combined attack, or to take advantage of a false movement of the enemy, or to finish his defeat by pressing him while in retreat. It is not an easy matter to determine the best mode of attacking, as it depends upon the object in view and other circumstances. There are but four methods of charging,—in columns, in lines at a trot, in lines at a gallop, and in open order,— all of which may be successfully used. In charges in line, the lance is very useful; in mêlées, the saber is much better: hence comes the idea of giving the lance to the front rank, which makes the first onslaught, and the saber to the second rank, which finishes the encounter usually in individual combats. Pistolfiring is of very little use except for outpost-duty, in a charge as foragers, or when light cavalry desires to annoy infantry and draw its fire previous to a charge. I do not know what the carbine is good for; since a body of cavalry armed with it must halt if they wish to fire with any accuracy, and they are then in a favorable condition for the enemy to attack. There are few marksmen who can with any accuracy fire a musket while on horseback and in rapid motion. I have just said that all the methods of charging may be equally good. It must not be understood, however, that impetuosity always gives the advantage in a shock of cavalry against cavalry: the fast trot, on the contrary, seems to me the best gait for charges in line, because every thing depends, in such a case, upon the ensemble and good order of the movement,—things which cannot be obtained in charges at a fast gallop. Galloping is proper against artillery when it is important to get over the ground as rapidly as possible. In like manner, if the cavalry is armed with sabers, it may take the gallop at two hundred yards from the enemy's line if it stands firmly to receive the attack. But if the cavalry is armed with the lance, the fast trot is the proper gait, since the advantageous use of that weapon depends upon the preservation of good order: in a mêlée the lance is almost useless. If the enemy advances at a fast trot, it does not seem prudent to gallop to meet him; for the galloping party will be much disordered, while the trotting party will not. The only advantage of the gallop is its apparent boldness and the moral effect it produces; but, if this is estimated at its true value by the enemy, it is reasonable to expect his firm and compact mass to be victorious over a body of horsemen galloping in confusion. In their charges against infantry the Turks and Mamelukes showed the small advantage of mere impetuosity. No cavalry will penetrate where lancers or cuirassiers at a trot cannot. It is only when infantry is much disordered, or their fire poorly maintained, that there is any advantage in the impetuous gallop over the steady trot. To break good squares, cannon and lancers are required, or, better still, cuirassiers armed with lances. For charges in open order there are no better models for imitation than the Turks and the Cossacks. Whatever method be adopted in charging, one of the best ways of using cavalry is to throw several squadrons opportunely upon the flanks of an enemy's line which is also attacked in front. That this maneuver may be completely successful.

Especially in charges of cavalry against cavalry, it should be performed at the very moment when the lines come in collision; for a minute too soon or too late its effect may be lost. It is highly important, therefore, that a cavalry commander should have a quick eye, sound judgment, and a cool head. Much discussion has taken place about the proper manner of arming and organizing cavalry. The lance is the best arm for offensive purposes when a body of horsemen charge in line; for it enables them to strike an enemy who cannot reach them; but it is a very good plan to have a second rank or a reserve armed with sabers, which are more easily handled than the lance in hand-to-hand fighting when the ranks become broken. It would be, perhaps, better still to support a charge of lancers by a detachment of hussars, who can follow up the charge, penetrate the enemy's line, and complete the victory. The cuirass is the best defensive armor. The lance and the cuirass of strong leather doubled seem to me the best armament for light cavalry, the saber and iron cuirass the best for heavy cavalry. Some military men of experience are inclined even to arm the cuirassiers with lances, believing that such cavalry, resembling very much the men-at-arms of former days, would bear down every thing before them. A lance would certainly suit them better than the musketoon; and I do not see why they should not have lances like those of the light cavalry. Opinions will be always divided as to those amphibious animals called dragoons. It is certainly an advantage to have several battalions of mounted infantry, who can anticipate an enemy at a defile, defend it in retreat, or scour a wood; but to make cavalry out of foot-soldiers, or a soldier who is equally good on horse or on foot, is very difficult. This might have been supposed settled by the fate of the French dragoons when fighting on foot, had it not been seen that the Turkish cavalry fought quite as well dismounted as mounted. It has been said that the greatest inconvenience resulting from the use of dragoons consists in the fact of being obliged at one moment to make them believe infantry squares cannot resist their charges, and the next moment that a foot-soldier armed with his musket is superior to any horseman in the world. This argument has more plausibility than real force; for, instead of attempting to make men believe such contradictory statements, it would be much more reasonable to tell them that if brave cavalry may break a square, brave foot-soldiers may resist such a charge; that victory does not always depend upon the superiority of the arm, but upon a thousand other things; that the courage of the troops, the presence of mind of the commanders, the opportuneness of maneuvers, the effect of artillery and musketry fire, rain,—mud, even,—have been the causes of repulses or of victories; and, finally, that a brave man, whether on foot or mounted, will always be more than a match for a coward. By impressing these truths upon dragoons, they will believe themselves superior to their adversaries whether they fight on foot or on horseback. This is the case with the Turks and the Circassians, whose cavalry often dismount to fight on foot in a wood or behind a cover, musket in hand, like foot-soldiers. It requires, however, fine material and fine commanders to bring soldiers to such perfection in knowledge of their duties.

The conviction of what brave men can accomplish, whether on foot or mounted, doubtless induced the Emperor Nicholas to collect the large number of fourteen or fifteen thousand dragoons in a single corps, while he did not consider Napoleon's unfortunate experiment with French dragoons, and was not restrained by the fear of often wanting a regiment of these troops at some particular point. It is probable that this concentration was ordered for the purpose of giving uniformity to the instruction of the men in their duties as foot and mounted soldiers, and that in war they were to be distributed to the different grand divisions of the army. It cannot be denied, however, that great advantages might result to the general who could rapidly move up ten thousand men on horseback to a decisive point and bring them into action as infantry. It thus appears that the methods of concentration and of distribution have their respective advantages and disadvantages. A judicious mean between the extremes would be to attach a strong regiment to each wing of the army and to the advanced guard, (or the rear-guard in a retreat,) and then to unite the remaining troops of this arm in divisions or corps. Every thing that was said with reference to the formation of infantry is applicable to cavalry, with the following modifications:— Lines deployed checkerwise or in echelons are much better for cavalry than full lines; whilst for infantry lines drawn up checkerwise are too much disconnected, and would be in danger if the cavalry should succeed in penetrating and taking the battalions in flank. The checkerwise formation is only advantageous for infantry in preparatory movements before reaching the enemy, or else for lines of columns which can defend themselves in every direction against cavalry. Whether checkered or full lines be used, the distance between them ought to be such that if one is checked and thrown into confusion the others may not share it. It is well to observe that in the checkered lines the distance may be less than for full lines. In every case the second line should not be full. It should be formed in columns by divisions, or at least there should be left the spaces, if in line, of two squadrons, that may be in column upon the flank of each regiment, to facilitate the passage through of the troops which have been brought up. When the order of columns of attack doubled on the center is used, cavalry should be formed in regiments and infantry only in battalions. The regiments should contain six squadrons, in order that, by doubling on the center into divisions, three may be formed. If there are only four squadrons, there can be but two lines. The cavalry column of attack should never be formed en masse like that of infantry; but there should always be full or half squadron distance, that each may have room to disengage itself and charge separately. This distance will be so great only for those troops engaged. When they are at rest behind the line of battle, they may be closed up, in order to cover less ground and diminish the space to be passed over when brought into action. The masses should, of course, be kept beyond cannon-range. A flank attack being much more to be apprehended by cavalry than in a combat of infantry with infantry, several squadrons should be formed in echelons by platoons on the flanks of a line of cavalry, which may form to the right or left, to meet an enemy.

Oming in that direction, For the same reason, it is important to throw several squadrons against the flanks of a line of cavalry which is attacked in front. Irregular cavalry is quite as good as the regular for this purpose, and it may be better. It is also of importance, especially in cavalry, that the commander-in-chief increase the depth rather than the extent of the formation. For example, in a deployed division of two brigades it would not be a good plan for one brigade to form in a single line behind the other, but each brigade should have one regiment in the first line and one in the second. Each unit of the line will thus have its own proper reserve behind it,—an advantage not to be regarded as trifling; for in a charge events succeed each other so rapidly that it is impossible for a general to control the deployed regiments. By adopting this arrangement, each general of brigade will be able to dispose of his own reserve; and it would be well, also, to have a general reserve for the whole division. This consideration leads me to think that five regiments would make a good division. The charge may then be made in line by brigades of two regiments, the fifth serving as a general reserve behind the center. Or three regiments may form the line, and two may be in column, one behind each wing. Or it may be preferable to use a mixed order, deploying two regiments and keeping the others in column. This is a good arrangement, because the three regiments, formed in columns by divisions behind the center and flanks of the line, cover those points, and can readily pass the line if it is beaten back. Cavalry division of five regiments. Cavalry deployed should be in checkered order rather than in full lines. Cavalry division of five regiments. Cavalry deployed should be in checkered order rather than in full lines. Two essential points are regarded as generally settled for all encounters of cavalry against cavalry. One is that the first line must sooner or later be checked; for, even upon the supposition of the first charge being entirely successful, it is always probable that the enemy will bring fresh squadrons to the contest, and the first line must at length be forced to rally behind the second. The other point is that, with troops and commanders on both sides equally good, the victory will remain with the party having the last squadrons in reserve in readiness to be thrown upon the flank of the enemy's line while his front is also engaged. Attention to these truths will bring us to a just conclusion as to the proper method of forming a large mass of cavalry for battle. Whatever order be adopted, care must be taken to avoid deploying large cavalry corps in full lines; for a mass thus drawn up is very unmanageable, and if the first line is checked suddenly in its career the second is also, and that without having an opportunity to strike a blow. This has been demonstrated many times. Take as an example the attack made by Nansouty in columns of regiments upon the Prussian cavalry deployed in front of Chateau-Thierry. In opposing the formation of cavalry in more than two lines, I never intended to exclude the use of several lines checkerwise or in echelons, or of reserves formed in columns. I only meant to say that when cavalry, expecting to make a charge, is drawn up in lines one behind the other.

The whole mass will be thrown into confusion as soon as the first line breaks and turns. With cavalry still more than with infantry the morale is very important. The quickness of eye and the coolness of the commander, and the intelligence and bravery of the soldier, whether in the mêlée or in the rally, will oftener be the means of assuring a victory than the adoption of this or that formation. When, however, a good formation is adopted and the advantages mentioned above are also present, the victory is more certain; and nothing can excuse the use of a vicious formation. The history of the wars between has renewed the old disputes upon the question whether regular cavalry will in the end get the better over an irregular cavalry which will avoid all serious encounters, will retreat with the speed of the Parthians and return to the combat with the same rapidity, wearing out the strength of its enemy by continual skirmishing. Lloyd has decided in the negative; and several exploits of the Cossacks when engaged with the excellent French cavalry seem to confirm his opinion. (When I speak of excellent French cavalry, I refer to its impetuous bravery, and not to its perfection; for it does not compare with the Russian or German cavalry either in horsemanship, organization, or in care of the animals.) We must by no means conclude it possible for a body of light cavalry deployed as skirmishers to accomplish as much as the Cossacks or other irregular cavalry. They acquire a habit of moving in an apparently disorderly manner, whilst they are all the time directing their individual efforts toward a common object. The most practiced hussars can never perform such service as the Cossacks, Tscherkesses, and Turks do instinctively. Experience has shown that irregular charges may cause the defeat of the best cavalry in partial skirmishes; but it has also demonstrated that they are not to be depended upon in regular battles upon which the fate of a war may depend. Such charges are valuable accessories to an attack in line, but alone they can lead to no decisive results. From the preceding facts we learn that it is always best to give cavalry a regular organization, and furnish them long weapons, not omitting, however, to provide, for skirmishing, &c., an irregular cavalry armed with pistols, lances, and sabers. Whatever system of organization be adopted, it is certain that a numerous cavalry, whether regular or irregular, must have a great influence in giving a turn to the events of a war. It may excite a feeling of apprehension at distant parts of the enemy's country, it can carry off his convoys, it can encircle his army, make his communications very perilous, and destroy the ensemble of his operations. In a word, it produces nearly the same results as a rising en masse of a population, causing trouble on the front, flanks, and rear of an army, and reducing a general to a state of entire uncertainty in his calculations. Any system of organization, therefore, will be a good one which provides for great enlargement of the cavalry in time of war by the incorporation of militia; for they may, with the aid of a few good regular squadrons, be made excellent partisan soldiers. These militia would certainly not possess all the qualities of those warlike wandering tribes who live on horseback and seem born cavalrysoldiers; but they could in a measure supply the places of such. In this respect Russia is much better off than any of her neighbors.

Both on account of the number and quality of her horsemen of the Don, and the character of the irregular militia she can bring into the field at very short notice. Twenty years ago I made the following statements in of the Treatise on Grand Military Operations, when writing on this subject:— "The immense advantages of the Cossacks to the Russian army are not to be estimated. These light troops, which are insignificant in the shock of a great battle, (except for falling upon the flanks,) are terrible in pursuits and in a war of posts. They are a most formidable obstacle to the execution of a general's designs,—because he can never be sure of the arrival and carrying out of his orders, his convoys are always in danger, and his operations uncertain. If an army has had only a few regiments of these half-regular cavalry-soldiers, their real value has not been known; but when their number increases to fifteen thousand or twenty thousand, their usefulness is fully recognized,—especially in a country where the population is not hostile to them. "When they are in the vicinity, every convoy must be provided with a strong escort, and no movement can be expected to be undisturbed. Much unusual labor is thus made necessary upon the part of the opponent's regular cavalry, which is soon broken down by the unaccustomed fatigue. "Volunteer hussars or lancers, raised at the time of war breaking out, may be nearly as valuable as the Cossacks, if they are well officered and move freely about from point to point." In the Hungarians, Transylvanians, and Croats, Austria has resources possessed by few other states. The services rendered by mounted militia have proved, however, that this kind of cavalry may be very useful, if for no other purpose than relieving the regular cavalry of those occasional and extra duties to be performed in all armies, such as forming escorts, acting as orderlies, protecting convoys, serving on outposts, &c. Mixed corps of regular and irregular cavalry may often be more really useful than if they were entirely composed of cavalry of the line,—because the fear of compromising a body of these last often restrains a general from pushing them forward in daring operations where he would not hesitate to risk his irregulars, and he may thus lose excellent opportunities of accomplishing great results. Employment of Artillery. Artillery is an arm equally formidable both in the offensive and defensive. As an offensive means, a great battery well managed may break an enemy's line, throw it into confusion, and prepare the way for the troops that are to make an assault. As a defensive means, it doubles the strength of a position, not only on account of the material injury it inflicts upon the enemy while at a distance, and the consequent moral effect upon his troops, but also by greatly increasing the peril of approaching near, and specially within the range of grape. It is no less important in the attack and defense of fortified places or intrenched camps; for it is one of the main reliances in modern systems of fortification. I have already in a former portion of this book given some directions as to the distribution of artillery in a line of battle; but it is difficult to explain definitely the proper method of using it in the battle itself. It will not be right to say that artillery can act independently of the other arms, for it is rather an accessory. At Wagram, however, Napoleon threw a battery.

Of one hundred pieces into the gap left by the withdrawal of Massena's corps, and thus held in check the Austrian center, notwithstanding their vigorous efforts to advance. This was a special case, and should not be often imitated. I will content myself with laying down a few fundamental rules, observing that they refer to the present state of artillery service, The recent discoveries not yet being fully tested, I shall say little with reference to them. In the offensive, a certain portion of the artillery should concentrate its fire upon the point where a decisive blow is to be struck. Its first use is to shatter the enemy's line, and then it assists with its fire the attack of the infantry and cavalry. Several batteries of horse-artillery should follow the offensive movements of the columns of attack, besides the foot-batteries intended for the same purpose. Too much foot-artillery should not move with an offensive column. It may be posted so as to co-operate with the column without accompanying it. When the cannoneers can mount the boxes, it may have greater mobility and be advanced farther to the front. It has already been stated that half of the horse-artillery should be held in reserve, that it may be rapidly moved to any required point. For this purpose it should be placed upon the most open ground, whence it can move readily in every direction. I have already indicated the best positions for the heavy calibers. The batteries, whatever may be their general distribution along the defensive line, should give their attention particularly to those points where the enemy would be most likely to approach, either on account of the facility or the advantage of so doing. The general of artillery should therefore know the decisive strategic and tactical points of the battle-field, as well as the topography of the whole space occupied. The distribution of the reserves of artillery will be regulated by these. Artillery placed on level ground or ground sloping gently to the front is most favorably situated either for point-blank or ricochet firing: a converging fire is the best. It should be borne in mind that the chief office of all artillery in battles is to overwhelm the enemy's troops, and not to reply to their batteries. It is, nevertheless, often useful to fire at the batteries, in order to attract their fire. A third of the disposable artillery may be assigned this duty, but two-thirds at least should be directed against the infantry and cavalry of the enemy. If the enemy advance in deployed lines, the batteries should endeavor to cross their fire in order to strike the lines obliquely. If guns can be so placed as to enfilade a line of troops, a most powerful effect is produced. When the enemy advance in columns, they may be battered in front. It is advantageous also to attack them obliquely, and especially in flank and reverse. The moral effect of a reverse fire upon a body of troops is inconceivable; and the best soldiers are generally put to flight by it. The fine movement of Ney on Preititz at Bautzen was neutralized by a few pieces of Kleist's artillery, which took his columns in flank, checked them, and decided the marshal to deviate from the excellent direction he was pursuing. A few pieces of light artillery, thrown at all hazards upon the enemy's flank, may produce most important results, far overbalancing the risks run. Batteries should always have supports of infantry or cavalry, and especially on their flanks, Cases may occur.

where the rule may be deviated from: Wagram is a very remarkable example of this. It is very important that artillerists, when threatened by cavalry, preserve their coolness. They should fire first solid shot, next shells, and then grape, as long as possible. The infantry supports should, in such a case, form squares in the vicinity, to shelter the horses, and, when necessary, the cannoneers. When the infantry is drawn up behind the pieces, large squares of sufficient size to contain whatever they should cover are best; but when the infantry is on the flanks, smaller squares are better. Rocket-batteries may also be very efficient in frightening the horses. When infantry threatens artillery, the latter should continue its fire to the last moment, being careful not to commence firing too soon. The cannoneers can always be sheltered from an infantry attack if the battery is properly supported. This is a case for the co-operation of the three arms; for, if the enemy's infantry is thrown into confusion by the artillery, a combined attack upon it by cavalry and infantry will cause its destruction. The proportions of artillery have varied in different wars. Napoleon conquered Italy in with forty or fifty pieces,—whilst in he invaded Russia with one thousand pieces thoroughly equipped, and failed. These facts show that any fixed rule on the subject is inadmissible. Usually three pieces to a thousand combatants are allowed; but this allowance will depend on circumstances. The relative proportions of heavy and light artillery vary also between wide limits. It is a great mistake to have too much heavy artillery, whose mobility must be much less than that of the lighter calibers. A remarkable proof of the great importance of having a strong artillery-armament was given by Napoleon after the battle of Eylau. The great havoc occasioned among his troops by the numerous guns of the Russians opened his eyes to the necessity of increasing his own. With wonderful vigor, he set all the Prussian arsenals to work, those along the Rhine, and even at Metz, to increase the number of his pieces, and to cast new ones in order to enable him to use the munitions previously captured. In three months he doubled the matériel and personnel of his artillery, at a distance of one thousand miles from his own frontiers,—a feat without a parallel in the annals of war. One of the surest means of using the artillery to the best advantage is to place in command of it a general who is at once a good strategist and tactician. This chief should be authorized to dispose not only of the reserve artillery, but also of half the pieces attached to the different corps or divisions of the army. He should also consult with the commanding general as to the moment and place of concentration of the mass of his artillery in order to contribute most to a successful issue of the day, and he should never take the responsibility of thus massing his artillery without previous orders from the commanding general. Of the Combined Use of the Three Arms. To conclude this Summary in a proper manner, I ought to treat of the combined use of the three arms; but I am restrained from so doing by considering the great variety of points necessary to be touched upon if I should attempt to go into an examination of all the detailed operations that would arise in the application of the general rules laid down for each of the arms. Several authors—chiefly German—have treated.

This subject very extensively, and their labors are valuable principally because they consist mainly of citations of numerous examples taken from the actual minor engagements of the later wars. These examples must indeed take the place of rules, since experience has shown that fixed rules on the subject cannot be laid down. It seems a waste of breath to say that the commander of a body of troops composed of the three arms should employ them so that they will give mutual support and assistance; but, after all, this is the only fundamental rule that can be established, for the attempt to prescribe for such a commander a special course of conduct in every case that may arise, when these cases may be infinitely varied, would involve him in an inextricable labyrinth of instructions. As the object and limits of this Summary do not allow me to enter upon the consideration of such details, I can only refer my readers to the best works which do treat of them. I have said all I can properly say when I advise that the different arms be posted in conformity with the character of the ground, according to the object in view and the supposed designs of the enemy, and that they be used simultaneously in the manner best suited to them, care being taken to enable them to afford mutual support. A careful study of the events of previous wars, and especially experience in the operations of war, will give an officer correct ideas on these points, and the ability to use, at the right time and place, his knowledge of the properties of the three arms, either single or combined. CONCLUSION. I am constrained to recapitulate the principal facts which may be regarded as fundamental in war. War in its ensemble is not a science, but an art. Strategy, particularly, may indeed be regulated by fixed laws resembling those of the positive sciences, but this is not true of war viewed as a whole. Among other things, combats may be mentioned as often being quite independent of scientific combinations, and they may become essentially dramatic, personal qualities and inspirations and a thousand other things frequently being the controlling elements. The passions which agitate the masses that are brought into collision, the warlike qualities of these masses, the energy and talent of their commanders, the spirit, more or less martial, of nations and epochs, in a word, every thing that can be called the poetry and metaphysics of war,—will have a permanent influence on its results. Shall I be understood as saying that there are no such things as tactical rules, and that no theory of tactics can be useful? What military man of intelligence would be guilty of such an absurdity? Are we to imagine that Eugene and Marlborough triumphed simply by inspiration or by the superior courage and discipline of their battalions? Or do we find in the events of Turin, Blenheim, and Ramillies maneuvers resembling those seen at Talavera, Waterloo, Jena, or Austerlitz, which were the causes of the victory in each case? When the application of a rule and the consequent maneuver have procured victory a hundred times for skillful generals, and always have in their favor the great probability of leading to success, shall their occasional failure be a sufficient reason for entirely denying their value and for distrusting the effect of the study of the art? Shall a theory be pronounced absurd because it has only three-fourths of the whole number of chances of success in its favor?

The morale of an army and its chief officers has an influence upon the fate of a war; and this seems to be due to a certain physical effect produced by the moral cause. For example, the impetuous attack upon a hostile line of twenty thousand brave men whose feelings are thoroughly enlisted in their cause will produce a much more powerful effect than the attack of forty thousand demoralized or apathetic men upon the same point. Strategy, as has already been explained, is the art of bringing the greatest part of the forces of an army upon the important point of the theater of war or of the zone of operations. Tactics is the art of using these masses at the points to which they shall have been conducted by well-arranged marches; that is to say, the art of making them act at the decisive moment and at the decisive point of the field of battle. When troops are thinking more of flight than of fight, they can no longer be termed active masses in the sense in which I use the term. A general thoroughly instructed in the theory of war, but not possessed of military coup-d'oeil, coolness, and skill, may make an excellent strategic plan and be entirely unable to apply the rules of tactics in presence of an enemy: his projects will not be successfully carried out, and his defeat will be probable. If he be a man of character, he will be able to diminish the evil results of his failure, but if he lose his wits he will lose his army. The same general may, on the other hand, be at once a good tactician and strategist, and have made all the arrangements for gaining a victory that his means will permit: in this case, if he be only moderately seconded by his troops and subordinate officers, he will probably gain a decided victory. If, however, his troops have neither discipline nor courage, and his subordinate officers envy and deceive him, he will undoubtedly see his fine hopes fade away, and his admirable combinations can only have the effect of diminishing the disasters of an almost unavoidable defeat. No system of tactics can lead to victory when the morale of an army is bad; and even when it may be excellent the victory may depend upon some occurrence like the rupture of the bridges over the Danube at Essling. Neither will victories be necessarily gained or lost by rigid adherence to or rejection of this or that manner of forming troops for battle. These truths need not lead to the conclusion that there can be no sound rules in war, the observance of which, the chances being equal, will lead to success. It is true that theories cannot teach men with mathematical precision what they should do in every possible case; but it is also certain that they will always point out the errors which should be avoided; and this is a highly-important consideration, for these rules thus become, in the hands of skillful generals commanding brave troops, means of almost certain success. The correctness of this statement cannot be denied; and it only remains to be able to discriminate between good rules and bad. In this ability consists the whole of a man's genius for war. There are, however, leading principles which assist in obtaining this ability. Every maxim relating to war will be good if it indicates the employment of the greatest portion of the means of action at the decisive moment and place.

In I have specified all the strategic combinations which lead to such a result. As regards tactics, the principal thing to be attended to is the choice of the most suitable order of battle for the object in view. When we come to consider the action of masses on the field, the means to be used may be an opportune charge of cavalry, a strong battery put in position and unmasked at the proper moment, a column of infantry making a headlong charge, or a deployed division coolly and steadily pouring upon the enemy a fire, or they may consist of tactical maneuvers intended to threaten the enemy's flanks or rear, or any other maneuver calculated to diminish the confidence of the adversary. Each of these things may, in a particular case, be the cause of victory. To define the cases in which each should be preferred is simply impossible. If a general desires to be a successful actor in the great drama of war, his first duty is to study carefully the theater of operations, that he may see clearly the relative advantages and disadvantages it presents for himself and his enemies. This being done, he can understandingly proceed to prepare his base of operations, then to choose the most suitable zone of operations for his main efforts, and, in doing so, keep constantly before his mind the principles of the art of war relative to lines and fronts of operations. The offensive army should particularly endeavor to cut up the opposing army by skillfully selecting objective points of maneuver; it will then assume, as the objects of its subsequent undertakings, geographical points of more or less importance, depending upon its first successes. The defensive army, on the contrary, should endeavor, by all means, to neutralize the first forward movement of its adversary, protracting operations as long as possible while not compromising the fate of the war, and deferring a decisive battle until the time when a portion of the enemy's forces are either exhausted by labors, or scattered for the purpose of occupying invaded provinces, masking fortified places, covering sieges, protecting the line of operations, depots, &c. Up to this point every thing relates to a first plan of operations; but no plan can provide with certainty for that which is uncertain always,—the character and the issue of the first conflict. If your lines of operations have been skillfully chosen and your movements well concealed, and if on the other hand your enemy makes false movements which permit you to fall on fractions of his army, you maybe successful in your campaign, without fighting general battles, by the simple use of your strategic advantages. But if the two parties seem about equally matched at the time of conflict, there will result one of those stupendous tragedies like Borodino, Wagram, Waterloo, Bautzen, and Dresden, where the precepts of grand tactics, as indicated in the chapter on that subject, must have a powerful influence. If a few prejudiced military men, after reading this book and carefully studying the detailed and correct history of the campaigns of the great masters of the art of war, still contend that it has neither principles nor rules, I can only pity them, and reply, in the famous words of Frederick, that "a mule which had made twenty campaigns under Prince Eugene would not be a better tactician than at the beginning." Correct theories, founded upon right principles, sustained by actual events of wars, and added to accurate military history, will form a true school of instruction for generals.

If these means do not produce great men, they will at least produce generals of sufficient skill to take rank next after the natural masters of the art of war. SUMMARY OF THE ART OF WAR. My Summary of the Art of War, published in, to assist in the military instruction of the Hereditary Grand Duke of Russia, contained a concluding article that was never printed. I deem it expedient to give it now in the form of a supplement, and add a special article upon the means of acquiring a certain and ready strategic coup-d'oeil. It is essential for the reader of my Summary to understand clearly that in the military science, as in every other, the study of details is easy for the man who has learned how to seize the fundamental features to which all others are secondary. I am about to attempt a development of these elements of the art; and my readers should endeavor to apprehend them clearly and to apply them properly. I cannot too often repeat that the theory of the great combinations of war is in itself very simple, and requires nothing more than ordinary intelligence and careful consideration. Notwithstanding its simplicity, many learned military men have difficulty in grasping it thoroughly. Their minds wander off to accessory details, in place of fixing themselves on first causes, and they go a long way in search of what is just within their reach if they only would think so. Two very different things must exist in a man to make him a general: he must know how to arrange a good plan of operations, and how to carry it to a successful termination. The first of these talents may be a natural gift, but it may also be acquired and developed by study. The second depends more on individual character, is rather a personal attribute, and cannot be created by study, although it may be improved. It is particularly necessary for a monarch or the head of a government to possess the first of these talents, because in such case, although he may not have the ability to execute, he can arrange plans of operations and decide correctly as to the excellence or defects of those submitted to him by others. He is thus enabled to estimate properly the capacity of his generals, and when he finds a general producing a good plan, and having firmness and coolness, such a man may be safely trusted with the command of an army. If, on the other hand, the head of a state is a man of executive ability, but not possessing the faculty of arranging wise military combinations, he will be likely to commit all the faults that have characterized the campaigns of many celebrated warriors who were only brave soldiers without being at all improved by study. From the principles which I have laid down, and their application to several famous campaigns, my readers will perceive that the theory of the great combinations of war may be summed up in the following truths. The science of strategy consists, in the first place, in knowing how to choose well a theater of war and to estimate correctly that of the enemy. To do this, a general must accustom himself to decide as to the importance of decisive points, —which is not a difficult matter when he is aided by the hints I have given on the subject, particularly in. The art consists, next, in a proper employment of the troops upon the theater of operations, whether offensive or defensive.