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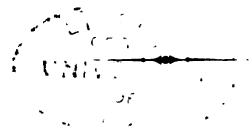
THE SPIRIT
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MILITARY INSTITUTIONS;
OR,
ESSENTIAL PRINCIPLES
OF
THE ART OF WAR.

BY
MARSHAL MARMONT,
DUKE OF MAGUSA.

TRANSLATED FROM THE LATEST EDITION, REVISED AND CORRECTED
BY THE AUTHOR;

WITH ILLUSTRATIVE NOTES,

By HENRY COPPÉE,
PROFESSOR OF ENGLISH LITERATURE IN THE UNIVERSITY OF PENNSYLVANIA
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MARSHAL MARMONT'S DEDICATION.

TO THE ARMY.

I DEDICATE my book to the army.

The army was my cradle; I have passed my life in its ranks. I have constantly shared in its labors, and more than once I have shed my blood, in those heroic times the memory of which shall never be lost.

Arrived at that age when all the interest and the consolations of life are found in meditating upon the past, I address to the army a last token of remembrance.

The soldiers, my companions in arms, united in themselves all the military virtues. To valor and to the love of glory, natural to Frenchmen, they joined a great respect for discipline and an unlimited confidence in their commander,—the first elements of success.

And thus, under my command, never, with equal forces, have they been beaten. Often conquerors, in spite of inferiority of numbers, they but very seldom yielded even to an immense superiority of force, or to the fatality of circumstances, and even then they always remained formidable enough, in the midst of reverses, to cause the enemy almost to regret his victory.

The soldiers of the present day march worthily in the footsteps of their predecessors; and the courage, patience and energy which they have unceasingly displayed in the long and painful war in Africa, demonstrate that always and everywhere they will respond to the needs and the exigencies of the country.

The former were the object of my most assiduous cares and of my liveliest solicitude.

The latter, as long as I live, shall have my warmest sympathies.

THE MARSHAL DUKE OF RAGUSA.

(iii)

TRANSLATOR'S PREFACE.

THE work now presented to the public has remarkable claims to the respectful attention of military men.

The French title, "*De l'Esprit des Institutions Militaires*," is perhaps most exactly translated, "Essential Principles of the Art of War." Here then will be found a condensation of these principles, not gathered from books, but presented from the author's experience of campaigns in which he played important parts, and on battle-fields of which he was an eye-witness, and, in many cases, a commander of the highest grade.

A brief enumeration of the principal events in his career will prove that he was essentially a fighting man and a skilful general, who has won the right to lay down the principles and make the criticisms contained in this work.

AUGUSTUS FREDERICK LOUIS VIESSE DE MARMONT was born at Châtillon, on the Seine, July 20, 1774. He was a sub-lieutenant before he was sixteen; and was with General Bonaparte at Toulon, and during the campaign of 1796 in Italy. He was the first man to disembark of the expedition to Egypt. Having returned with Bonaparte to France, he was with him on the 18th Brumaire; and in the campaign of 1800 he was director of the artillery, in its difficult passage over the St. Bernard and under the guns of the Fort of Bard, as well as on the victorious field of Marengo. At the end of the campaign he was general of division. He rendered excellent service at Wagram in 1809; and at Znaim was made Marshal of the Empire and Duke of Ragusa. Transferred to the command of the army of Portugal in place of Massena, in 1811, he displayed great skill; but lost the battle of Salamanca, being wounded early in the action. His arm was amputated a few days afterwards, and he was incapacitated from taking the field until 1818. In that year his genius and valor were splendidly conspicuous at Lützen, Bautzen, Dresden and Leipsic. In the terrible battle around Leipsic,

of which he gives us such graphic glimpses, he was badly wounded in several fingers of the remaining hand; but, guiding his horse with one sound finger, he charged the enemy at the head of his reserves.

Too much praise cannot be accorded him for his untiring energy and cheerful valor in the movements upon French soil in 1814. The fields of Brienne, Champ-Aubert, Vauchamps, Montmirail and others bear witness to his worth. His dispositions for the defence of Paris, and the battle which he fought there against overwhelming numbers on the 30th of March, 1814, were a fitting close of his military life; they were splendid efforts.

I need not enter upon the question of his evacuation of the city, and his submission to the Bourbons, further than to say that he was empowered by Joseph Bonaparte to open a conference with the allies, and that he stipulated for a guarantee of life and liberty to the Emperor Napoleon.

My task does not require me to speak of his career under the Restoration: he remained true to the Bourbons.

Those who desire fuller information may find it in his *Memoires*, 9 vols. 8vo., in which he vindicates his political and military conduct.

I have kept as close to the original as the idiom would permit, so as to present the author's very words: the few notes, generally of a popular character, are designed for elucidation to the general reader: the military man will find the original clear enough without notes. The author's notes are marked with the initial of his name, M.

My object in translating the work is to offer to the patriotic soldiers now in the field, in defence of the government, constitution and laws, a summary of the great practical principles of the art of war, which they may daily apply. Indeed, I have been struck by finding on almost every page some exact elucidation of military questions now arising, explanations of our military successes, and reasons for the reverses we have sustained. This is not a proper time to draw the parallels; they must be left to the intelligence of the reader and the labors of the future historian.

H. C.

PHILADELPHIA, February 20, 1862.

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INTRODUCTORY.

No modern work upon the art or the institutions of war, contains a complete body of doctrine.* Some special treatises have been published, upon the different arms; but, in general, the principles of the matter have not been laid down. In them we obtain superficial glimpses of the technical and minute details, without a sufficient indication of the great aim and the means by which it is attained.

Ancient writers have investigated military questions more profoundly; but how can their theories be appropriate, since the discovery of gunpowder has modified so completely the science of war?

Polybius and Vegetius† may still satisfy our curiosity;

* This seems to be wilful injustice to General Jomini, against whom the author was prejudiced; his *Précis de l'Art de la Guerre*; *Vie Politique et Militaire de Napoleon*; *Traité des grandes Opérations Militaires*; *Traité de grande Tactique*, etc., are the most valuable treatises on this general subject.

† Besides his histories, Polybius was the author of a work on tactics.

Vegetius, (*de re militari.*)

but let us look no longer in their writings for useful and applicable instruction.*

Ancient and modern wars have no point of resemblance,† except a moral relation, or that sublime part of the art which consists in a knowledge of the human heart,—knowledge, at all times, so important for the government of men, and which, in war, exerts an influence still more prompt and decisive.

All is changed in the form and the proportion of arms; their greater range keeps the combatants at greater distances; they impress greater terror, and produce also more prodigious results.

Add to this that formerly the combatants were in fewer numbers.

The command of troops offers at the present day far greater difficulties. Among the ancients, who fought always hand to hand, the army was compactly formed. The small number of soldiers occupied but a very limited space; its front was scarcely equivalent to that of one of

* The author appears to confound the ancient works on *tactics* with the ancient military *histories*. Xenophon, Polybius, and Arrian have all written works, or sections of works, on the tactical systems of their day. These, indeed, may have no other interest for the modern military student, than to satisfy an antiquarian curiosity. But the same writers—and to them may be added a greater, Julius Cæsar—have likewise left behind them military histories—histories of ancient campaigns recorded by ancient soldiers.

† So far as the *tactics* of the ancient wars are concerned, yes. But not so for their *strategy*. Jomini, in his *Précis de l'Art de la Guerre*, (t. i. p. 12,) declares that "*strategy* was the same in the days of Cæsar, as in those of Napoleon."

our brigades. If a general could not exactly see each one of his soldiers, he could, at least, be seen by every one. Operating upon so small a scale, the supreme chief was able to betake himself everywhere; and this chief was himself a combatant, setting the example, sword in hand. In our days, the general fights by will and by thought; his skill in the management of the sword is of small importance; his mind embraces a very different space from that spread before his sight: a general, in one word, is very much less of a soldier—although he should strive to become a good one—than a moral being who, by his influence over other intelligences, seems to govern events, like the mysterious powers of nature.

Thus modern war constitutes an entirely new art, which would find neither model nor elucidation in the wars of the Greeks and the Romans.*

* *Contrà*, Napoleon. Dr. Arnold remarks: "Now it so happens, that one who well knew what military lessons were instructive, the Emperôr Napoleon, has selected out of the whole range of history the campaigns of seven generals only, as important to be studied by an officer professionally, in all their details; and of these seven, three belong to the times of Greece and Rome, namely, Alexander, Hannibal, and Cæsar." (The campaigns of the first two, it may be added, are best read in the works of Arrian and of Polybius.) It may be concluded, then, that Marshal Marmont is right in pronouncing the ancient works on *tactics* to be of no use to the modern student, but that he should not have said the same of their works on *strategy*—that is, their histories of such campaigns as Napoleon recommended for careful study. But even if we admit, that the ancient writers furnish nothing—in *strategy* any more than in *tactics*—to *copy*, they may yet be useful by what they do to *inspire*. When such a mind as Julius Cæsar's not only records his movements before Pharsalia, but also explains the *ratio* of them, it is

If the greatest captains of antiquity, if Alexander, Hannibal, Cæsar, could return to earth, and chance to come upon a field of battle, their military genius would understand nothing there; and they would need more than one campaign before they could completely embrace the mechanism of the profession, the consequences of our institutions, and of the new arms.

These truths are so evident to all who have made war, that it is asked how, even in the time of Louis XIV., the reveries of the Chevalier Folard were seriously entertained, and still later, the more foolish reveries of Mênil-Durand, to such a degree as to establish a camp expressly (at Bayeux) to make comparative experiments of formation and manœuvre. It is more astonishing still that a general of our own epoch (Rogniat, general of engineers)*

impossible that the genius of the modern military student shall not be stirred and inspired, not only to copy but to emulate. Nay, it may well happen, that some original minds would derive less real inspiration from the reading of *modern* campaigns, wherein all the appliances and accompaniments are familiar and stale, than from that of *ancient* wars, in which, while the strategical genius was the same, it had to deal with means so widely different. It is in this way, perhaps, that we account for a portion of the attraction which the study of the Greek and Roman art of war has had for some of the most powerful military minds of modern times. The last work of Napoleon was a volume of memoranda on the campaigns of Cæsar.

* If General Rogniat's work (*Considerations sur l'Art de la Guerre*, Paris, 1820,) were really such visionary trash as our author would have us believe, it was sad waste of time in Napoleon to devote to it a volume of criticism. The book (with its *Réponse aux Notes Critiques de Napoleon*, Paris, 1823,) is, at least, a remarkably interesting one.

should have written a large book to resuscitate and amplify these delirious fancies; for if he did not figure among combatants, he had at least the opportunity and the necessity to witness battles.

I have proposed to myself, to sum up, in a brief sketch, the essential principles of military operations, organization and institutions. I have sought to demonstrate that nothing should be left to chance in this matter; that everything in it should depend upon a generating principle, from which necessary consequences flow.

A principle is discovered by a careful consideration of the end to be attained, and by then seeking the best means of attaining it.

Principles being established and recognized, genius properly applies them; and it is in this that the whole art of war consists.

It seemed to me useful to set them forth in the simplest manner; and to compose a kind of rudimentary system of the military art, which shall embrace at once all the branches of this art and the different services of armies;—by stripping it of the technical charlatanism which too often accompanies it.

Nevertheless, the study of military men is not limited to a knowledge of these principles: they ought, besides, to read attentively the history of the campaigns of great generals; for the entire genius of these superior men is displayed in the application of these principles.

In this direction the military literature of France is

particularly rich ; but even here a choice may be made. We prefer to go back to the source ; we limit ourselves to the works of those who have themselves commanded ; for little fruit may be expected from those campaigns related by subaltern officers, who, strangers to all the difficulties of command, and often to the first ideas of the profession, set themselves up as masters, as censors ; new Ther-sites, they are sarcastic in their language, but feeble in heart and arms ; better constituted for talking than for fighting. Their works are a tissue of errors and falsehoods.

Above all the documents which ought to be carefully studied, may be recommended the dictations of Napoleon, published under the title of *Memoirs of Montholon*. In every line we recognize the superior genius, the powerful logic, the authority of the great captain. His opinions or his explanations, although sometimes susceptible of controversy, offer immense instruction ; he who can meditate upon and understand them, will have the very instinct of war.

An older work, which cannot be too much studied, is the book published by the Archduke Charles of Austria,* under the title of *Principles of Strategy*. There may be seen the application of his principles to the movements which he made in 1796 against the armies of the Rhine

* Son of the Emperor Leopold II., born 1771, distinguished as a general in the wars of the French revolution. His great work is *Grundsätze der Strategie erläutert durch die Darstellung des Feldzugs von 1796, in Deutschland*. Translated into French for Jomini, and annotated by him.

and of the Sambre-et-Meuse. It is a picture of all the rules of great campaigns.

The Memoirs of Marshal Gouvion St. Cyr,* and the History of the Campaign in Russia, by M. de Segur,† may be read with advantage. It is from such sources that wholesome instruction and the surest ideas must be drawn.

I have long studied the constitution of the different arms, and their most proper employment; and I believe the principles true, which I am about to expound. I recommend them to those ardent, intelligent and valorous young men, who are taking our places. It is for them that I have written.

The work now presented to the public is the last contingent of service which I can offer, at the close of my life, to the profit of a science which I have always cultivated with ardor, and of a profession which I have pursued with enthusiasm.

* LOUIS GOUVION ST. CYR, born 1764. In 1795 a general of division; in 1798, in command at Rome; in 1799, with Moreau on the Danube and at Hohenlinden; in 1812 with Napoleon in Russia; wounded at the retreat from Moscow. He served under the restoration; but, opposing the change in the law of elections, he resigned, went into retirement, and died in 1830.

† I visited in 1826, and spent a whole day upon, the battle-field of La Moskwa,—[the last battle, near the city of Moscow, before the entrance,]—with many French and Russian officers who had taken part in the action; I read, on the spot, the three well-known narrations of De Segur, De Chambray, De Boutourlin; in my opinion, the first mentioned alone gives an exact account of the manner in which the events must have transpired there.—M.

My leisure has found a charm in this summary of my studies and my remembrances. It is, moreover, the fruit of meditations, developed in my mind by my long and frequent conversations with Napoleon, by twenty campaigns of actual war, and by more than half a century of military experience.

PART I.

GENERAL THEORY OF THE MILITARY ART.

CHAPTER I.

DEFINITIONS.

BEFORE entering upon the subject, I will begin with a few definitions.

The art of war is the aggregation of the various kinds of knowledge necessary for the control of a mass of armed men,—to organize it, to move it, to cause it to fight, and to give to its component elements their greatest value, compatible with their preservation.

A genius for war consists in the talent for applying these elements appropriately, and for proposing the best combinations, with exactness and promptitude, in the midst of dangers and crises.

Military genius is incomplete, if, to the faculty of making these combinations, which I will call technical, a general does not unite a knowledge of human nature; if he has not the instinct to divine what is passing in the souls of his soldiers, and of the enemy. These inspirations,

variable as they are, form the **moral*** of war; a mysterious action which gives instantaneous power to an army, and causes one man to be worth ten, and ten not to be equal in value to one.

There are two other faculties equally necessary,—authority and decision, which are natural gifts.

Moreover, if to constitute a great general, great intelligence is needed, still more is character requisite. It is character which presides at the execution of plans. It is character which, in both ancient and modern times, has caused generals of the first class to shine.

The military arts consist in the knowledge of the scientific or mechanical processes which regulate the details of action, and the employment of the proper means.

Thus, strategy, tactics, artillery, fortifications, organization, the administration of armies, are military arts which should be familiar to a general. Each art has its theory; but the talent to make use of it with advantage, demands frequent applications and an observant mind.

Of all human events, those connected with war demand more, doubtless, of the concurrence of that aid which is called experience. The soldier must become accustomed to danger, to that physiognomy of battles which presents so many different phenomena. The man born brave, will be able at the outset to expose himself to danger without fear and suffering, sometimes even with pleas-

* This use of *moral*, although recognized, is classed by Bescherelle (Dictionnaire National) among the *Neologismes*.

ure; but it is only by the lapse of time that he will acquire the faculty of discriminating how he will be able to make, by offering his life as a sacrifice, the best possible use of it.

Finally, the profession of arms is—a life consecrated to military labors; and this expression is most properly applied to those who execute rather than theorize.

CHAPTER II.

GENERAL PRINCIPLES.

General principles for the conduct of armies are not very numerous, but their application gives rise to a great variety of combinations, which it is impossible to foresee and to lay down as rules.

The conditions in which an army finds itself vary almost infinitely; the principal points of view are—the combination, in one, of the elements which compose it; the relative condition of the two armies; the nature of the theatre of war, and of the neighboring territories; the part to be played, whether offensive or defensive; the reputation and character of the general against whom we act, etc. etc.

Various circumstances open an immense field to combinations; the greatest mind is incapable of embracing them all. Thus it happens that the greatest generals commit blunders; the best are those who commit the fewest. The more, however, we admit new elements into our calculations, the more we control events. A prudent foresight must embrace in its plans not only the probable, but the possible; and thus we have a proper guarantee against fortuitous risks. Thus it is that, in the day of reverses, we foresee and guard against great catastrophes.

This foresight was one of the highest faculties of Napoleon in his prime. His adversaries being almost always without it, the results which he thereby obtained astonished the world.

I will lay down, as principles, certain rules of which a general should never lose sight. I shall only indicate the aim and design; the means must always be subordinate to circumstances.

Two armies being of nearly the same force, and of about the same *morale*, the chances are equal. To render these chances more favorable, our movements should be combined in such a manner as to deceive the enemy, inspiring him with such fears as will lead him to divide his forces. Then the more skilful general, gathering his own suddenly together, overwhelms his divided adversary; and the momentary superiority which he has been able to acquire, makes the final victory comparatively easy.

Numerical superiority, at the very instant of the combat, is of extreme importance. Doubtless the quality of troops is more to be considered than their numbers; but, in the present excellent condition of the armies of Europe, the number and the combination of means concur powerfully to produce success. It is otherwise when civilized troops fight against barbarians, who, deprived of instruction and without discipline, do not form a compact aggregation. Operating without union and without harmony, they are always inferior, at a given time, to the weaker but more united mass by which they are opposed. Two

attacks repeated without success—often one, indeed—will decide the less brave to retire: the others are affected by the contagion of example, and soon all have disappeared. Conflicting opinions then take the place of arms. Thus are explained the wars of the Greeks against the Persians, the battles of Marathon and Plataea, the conquests of Alexander, the triumphs of the small Roman armies over the Germans and the Gauls, and, in our own time, the success of European armies against the Turks, notwithstanding the disproportion of numbers.

With the purpose of dispersing the forces of the enemy, we must harass him particularly upon those points essential to his safety, and promptly seize the moment in which he has yielded to our feints, to attack him upon a weak point with superior numbers. This is just what is called a *feint* in fencing phrase,—with the sword in hand, in single combat. Two or three slight partial advantages open the way for the more considerable ones which decide the fate of the campaign.

It is thus seen how important it is for a general to assume the initiative in movements: thus he overrules the design of his enemy, and a first success frequently gives an ascendancy which is never lost. But the favorable moment must be clearly discerned. Too great a disproportion in force and in the various means, would be an insurmountable obstacle. We should wait until the confidence of the enemy leads him into error. Profiting diligently by the occasion when offered, the skilful general may thus obtain an advantage which will permit him to

turn the tables on his adversary, and to pass from defensive to offensive.

This is what happened, remarkably, in 1796, in the immortal campaign of Italy. The French army, having arrived at the frontiers of the Tyrol, and in a defensive position, found itself much inferior to the Austrian army, augmented as it was by the reinforcements led by Wurmser* in person. The enemy's general, in attacking, had divided his forces; the French general reunited his own, and soon a first success enabled him to assume the offensive in turn. Afterwards a series of victories succeeded, in combats where the French army was almost always superior in numbers, on the field of battle.

To sum up, in one word, this division of the art of war, which applies to the general movements of armies, it should be observed that it is always founded upon a calculation of **time, distance, and celerity of movement.**

* Dagobert Sigismond, Graf von Wurmser, born in 1724, was a septuagenarian when in command of the Austrian army in Italy. After a siege of nine months he surrendered to Napoleon at Mantua in 1797.

CHAPTER III.

BASES AND LINES OF OPERATION AND STRATEGY.

The **base of operations** of an army is composed of the country which it covers, which furnishes its wants, which sends to it every day the supplies of every kind which it consumes,—of men, horses, provisions and munitions,—and which receives its sick and wounded, etc. etc.

The **line of operation** is determined by the general direction of the march, which is indicated by the object of operation, or the point which it is desired to attain.

The general movements which are executed out of sight of the enemy, and before an action, are called **strategy**.

Strategic points are those which it is important to occupy, whether to threaten the enemy's communications, or to cover our own. They should be chosen in such a manner as to facilitate the combinations of the movements of the different columns of an army. In general, the place where many roads meet is a strategic point; in a mountainous country, the place where many valleys come together is a strategic point.

Strategic lines are those which join strategic points, which are useful in the movements to be made between them; they should be the shortest lines possible.

In the judicious choice of strategic points and lines

consist the safety of armies in case of reverse, and the cause of the greatest results in case of success.

Napoleon possessed in an eminent degree a genius for strategy; no general has ever surpassed him in this respect; no one has been able better to discern, in advance, the point where he ought to strike.

A great army is composed of many columns; they are necessarily separated, that they may be subsisted and moved with facility. Their arrangement should be such that the most distant parts will be able to arrive on the field in time for battle, either to take part in the combat, or simply to act as a reserve. The aim of strategy is to combine the march for the promptest union of troops upon the same point; sometimes on the centre; sometimes on one of the wings. A march thus regulated is what Napoleon called his chess-board.*

His first campaigns were all of this character, except

* What Napoleon used to call his chess-board, was the field (zone) within which the movements which he was meditating, must take place. Thus, in 1813, with the complicated positions of his various *corps d'armées*, and those of his adversaries, before his mind's eye, he exclaimed to Marmont himself, (*Memoires*, t. v. p. 256,) 'L'échiquier est bien embrouillé; il n'y a que moi, qui puisse s'y reconnaître!'—an exclamation from which Thiers felt bound, as usual, to take all its homeliness and strength. (*Le Consulat et l'Empire*, t. xvi. p. 511.)

It may be well enough to add, that the figure, which Napoleon's chess-playing propensities led him thus habitually to employ, has been adopted by Rüstow, in his *Allgemeine Taktik*, (Zurich, 1858,) and has been carried out by him with true German completeness:—"From this," (he says, p. 27,) "it follows, that the number of the divisions of an army cannot be a matter of indifference. While the commander-in-chief is assigning them their respective places upon

Marengo, where, deviating from this principle, he was on the brink of defeat.* Everywhere else he is seen upon the day of action, assembling upon the field of battle all the forces of which he could reasonably dispose.

Moreau, on the contrary, whose talents have been so much praised, understood nothing of strategy.† His skill was shown in tactics. Personally very brave, he handled well, in the presence of the enemy, the troops occupying the space which his eye took in; but he fought his principal battles with only a part of his disposable strength.

At Hohenlinden,‡ where his success was so brilliant,

the given *chess-board*, he is really making a kind of composite *problem*. The divisions are the *pieces*, which he makes use of for this purpose. The distribution of these pieces corresponds to the subordinate problems, the successive *solution* of which effects the solution of the problem as a whole. The number of these subordinate problems, into which the main problem is subdivided, is repeated much in the same way upon any chess board, every theatre of military operations," etc. etc.

* The principal detachment was that of Desaix, which was too far off on the morning of the battle. Its forced march, and participation in the renewed battle of the afternoon, were due to Desaix, and not to the prevision of Napoleon.

† Napoleon himself expressed at that time his conviction and disappointment that Moreau could not command one hundred thousand men; and that there were not two men in France who could. His generals, however, soon developed their powers under his instructions.

‡ The battle was fought on the 3d of December, 1800, between the French under General Moreau, and the Austrians under the Archduke John, in the forest of Hohenlinden, between the rivers Iser and Inn. The success of the French was in a great measure due to the intelligence and courage of General Richepanse, who succeeded in gaining the Austrian rear, and throwing the centre column into fatal confusion.

Moreau ought to have been defeated, and would probably have been, if the Austrians had not manœuvred with unexampled carelessness. The French army was composed of twelve divisions; the three on the right, commanded by General Lecourbe, and the three on the left, conducted by General Sainte-Susanne, took no part in the battle. The Austrian army was united, but desultory in its march; the centre column, which encountered no obstacle, and followed the high road, with almost all the artillery, presented itself unsupported, and without being formed in battle array; it could thus be attacked in flank. Such good fortune was not due to the dispositions of General Moreau. General Richepanse, a man of talent and courage, finding his division surrounded by Austrian troops, which were beginning to organize, faced them in every direction, and possessed himself of a hundred pieces of cannon which were marching in column over the causeway.

The reunion of an army at the moment of battle being the *aim*, and rapidity of marches the *means*, the divisions, which are the *units*, should be combined, and to that end should be easy to move. An entire army will always have (although it may arrive in time) a slow movement; but rapidity may be given to the elements which compose it. To this end divisions should not be overburdened with artillery and subsistence stores. I do not approve the Russian usage of encumbering them with cannon. The great reserves of material and provisions of every kind should have an independent march; should be sufficient for themselves, and, in case of need, should be

escorted by special troops. It is the province of the general-in-chief to hold them always within reach of the place where they will be most useful, according to their destination.

There is another object which should call forth all the solicitude of a general, viz., to cover perfectly his line of operation, while at the same time he threatens that of the enemy. Open communications are necessary to the maintenance of an army; once lost, the moral condition is compromised. Confidence, that power of opinion the place of which nothing in the world can supply among troops, does not always resist such a trial.

Hence the necessity of an extended base of operations. If one stronghold and many fortified points are situated upon this base, or a great river form a part of it, great advantages result. The more extended the base, the better is the line of operations covered. It was a fundamental axiom of Napoleon. It is never departed from with impunity. In his splendid campaigns of 1805,* 1806,† and 1809,‡ he has presented great examples, and profited skilfully by the favorable circumstances which the direction of our frontier gave him.

* 1805. The coalition of Russia, Austria, Sweden and England; the naval defeat of the French at Trafalgar, was more than compensated by the capitulation of Ulm, and the splendid victory of Austerlitz, which produced the peace of Presburg.

† 1806. The Prussian campaign, containing the victory of Jena, and the entry into Berlin.

‡ 1809. The campaign of Aspern, Essling, and Wagram, terminating in the truce of Znaym.

Two armies which have bases of operation parallel, and of the same extent, are in similar conditions; and either one, in turning the other, is also forcibly turned. But it is not the same, if the two bases of operation are of different lengths and inclined towards each other.

In 1805, the French army, after the fine march from the coasts of the English Channel into Germany, directed itself upon the flank and rear of the Austrian army, which had invaded Bavaria. A battle lost upon the Danube would have thrown it back upon the Rhine; a battle gained caused the conquered army to lay down its arms.

In 1806, the French army, at the opening of the campaign, found itself upon the flank of the Prussian army; it was not the less careful to preserve its communications open with France from Mayence to Basle; and these communications were so well assured, that a reverse could have no great consequences, while a single victory produced the results so well known.

In 1812,* when Napoleon strayed to an unmeasured distance from his point of departure, (for, let it be observed that the dimensions of a base of operation to satisfy existing conditions are not absolute, but relative to the length of the line of operation,) his base was lost. Established at first upon the position of the different corps of his army, it would have sufficed if the army had remained nearer the frontier. But these bodies being abandoned to themselves, fluctuating, subjected to the chances of war, and encoun-

* The campaign in Russia.

tering hostile bodies of at least equal forces,—the army in the end lost all its communications. When they reached the banks of the Beresina, Napoleon was about to succumb; and the army would have been shattered to fragments, without a kind of miracle, the merit of which Admiral Tehitschakoff and General Kaptzievitsch may appropriate to themselves.*

But there are circumstances in which it is useful and salutary to change, in the midst of a campaign, the direction of the line of operation, and to choose another base; and although the most natural idea and the most habitual usage may be to place ourselves in front of the country which we wish to defend, it sometimes happens, nevertheless, that it is placed more efficaciously in a safe condition, by assuming a line of operation which seems to abandon it and deliver it up to the enemy.

When in 1797,† after the surrender of Mantua, the French army marched upon Vienna, the Austrian army, which found itself too inferior to offer battle, retired in the direction of the capital. If, instead of operating thus, it had taken post in the Tyrol, the natural obstacles which the country presents would have established a sort of equilibrium between the respective forces; the newly-

* "Tehitschakoff with the bulk of his forces was before Borisov, fully deceived by the pretended intentions of the French below that town, and he had only a detachment of light troops at Studianka."—THIERS, *Consulat et l'Empire*.

† The close of the first campaign in Italy.

raised troops of Hungary and Croatia, who could not be of good service on a day of battle, would have sufficed to cover the frontier of Friuli,* hold in check a French corps, and paralyse its action, notwithstanding the excellence of its troops, (for the French army had none but good troops.) Besides, the Austrian army, by taking this line of operation, would have gone to meet strong reinforcements, which could only come to it from the banks of the Rhine. In fine, if the war had carried the belligerent armies into Suabia and Bavaria, all the Austrian forces, reunited at the centre of operations, would have had the power to manœuvre under the most advantageous conditions. The Austrian army was then very wrong in taking the line of operation which it adopted.

Here is another example: In 1814, the Marshal Duke of Dalmatia, (Soult,) after having operated upon the Adour, was obliged to quit the basin of that river, and he directed his line of operation upon Toulouse. In this he acted wisely, for he thus kept off the English army from the centre of France, more certainly than in retiring upon Bordeaux, where they would have followed him: a small body of troops, supported by the national guards, placed in rear of the waste lands, and covering Bordeaux, would have guaranteed the safety of that town, if the spirit of the times and the political complications of the interior had not rendered these wise dispositions useless.

* An old province of Northern Italy, now forming the circle of Goritz, part of Triest, and the delegation of Friuli.

To sum up—**Strategy** has a double aim :—

1. To unite all the troops, or the greatest number possible, on the field of action, when the enemy has only a part of his own there; in other words, to cherish a numerical superiority for the day of battle.
2. To cover and insure our own communications, while threatening those of the enemy.

CHAPTER IV.

TACTICS.

Tactics is the art of handling troops upon the field of battle, and of manœuvring them without confusion. The end to be attained is to preserve order, in the midst of the apparent disorder produced by such a multitude of men, horses and machines, the combination of which forms an army,—and to obtain from them the greatest advantage.

Tactics is the science of the application of manœuvres. One may be a great tactician without any genius; but one does not become so without great practice: nothing is more simple to conceive than the theory; but the practice is not without difficulties. The general must be familiar with the means foreseen and calculated by the regulations; he must at one glance know how to judge of a field, estimate distances, determine clearly the direction, appreciate the details, combine the links in the chain of circumstances.

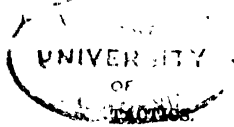
This kind of merit was incomplete in Napoleon; a fact explained by the first part of his career.

Simply an officer of artillery, up to the moment when

he was placed at the head of armies, he had never commanded either a regiment, a brigade, a division, or an army corps.* He had not been able to acquire that power of moving troops upon a given space which is developed by daily habit, ceaselessly varying the combinations. The wars in Italy offered him scarcely any application of this nature, the habitual actions being reduced in general to combats of posts, to the attack or to the defence of defiles, and to operations in the mountains.

Later, when he had attained to the supreme power, the strength of the armies which he led, requiring their organization into army corps, rendered the application of tactics less necessary to him. A general, at the head of eighty, one hundred, or one hundred and fifty thousand men, only gives the impulsion; he fixes the principal points of the movements; he establishes the general conditions of the battle; he provides, in fine, for the great accidents which may occur; he is the living providence of the army. The generals who manœuvre and fight are those who command thirty thousand men, and the generals under their orders; these latter should be familiar with tactics. If I have acquired some reputation in this respect, I owe it to my long sojourn in the camp of Zeist, where, for more than a year, I was constantly occupied in instructing excellent troops, and in instructing myself,

* Brigadier-General Chanaz, former sergeant of the Gardes Françaises, commanding officer of Paris during the winter of 1795-96, taught the manœuvres to General Bonaparte, who was then general-in-chief of the army of the interior.—M.



with that emulation and fervor which a first separate command in the palmy days of youth, affords.

Tactics has the same aim as strategy, but upon a smaller scale and a different theatre. Instead of operating over a vast country, and for whole days, the action is upon a battle-field the extent of which is embraced by the eye, and the movements upon which are accomplished in a few hours. The basis of the combinations, the proposed aim, is, always to be stronger than the enemy at an indicated point of the battle. Tactical talent consists in causing the unexpected arrival, upon the most accessible and the most important positions, of means which destroy the equilibrium, and give the victory; to execute, in a word, with promptness, movements which disconcert the enemy, and for which he is entirely unprepared.

To this effect it is essential to employ reserves appropriately and with judgment: this displays the true genius for war. We should carefully avoid using them too soon or too late; if too soon, we employ our means uselessly, and deprive ourselves of them at the moment when they will be most necessary; if too late, we either allow the victory to be incomplete, or the reverse to increase and become irreparable.

Every soldier should be compelled to expend his entire energies; but exhaustion comes, and it is at that moment, so important to recognize, that the use of succors is urgent. One thing is certain,—they will not fail to be asked for a long time before the urgency is real.

Napoleon was very skilful in this respect; he saw

clearly the knot of the battle. At Lützen,* he furnished me with a splendid proof. The engagement was unexpected. Believing the enemy to be in retreat, the emperor had set out for Leipsic with two army corps, and had directed me to make a strong reconnoissance upon Pegau. Starting from Rippach,† where I had passed the night, I deemed it prudent to make my movement by the right bank of the ravine, although this was the longer road. I did not wish to endanger my communications with the main body of the army, which owed its safety to this circumstance. I reached Starsiedel, in battle order, precisely at the moment when the enemy, having surprised the third corps, was about to surround and destroy it. I had the time to cover it partially, and to protect its right, while it flew to arms. The battle was fought immediately: immense masses of troops, an enormous cavalry and a considerable artillery attacked me. While the third corps was sustaining at Kaya a very obstinate infantry engagement, Napoleon flew to that point. The forces which I had in my front, constantly increasing in numbers, I sent to ask him for reinforcements; he sent word back that the battle was at Kaya, and not at Starsiedel; and he was right. I had indeed hindered the loss of a battle at its beginning, but it was in the centre that it was won.

In other circumstances Napoleon judged less justly.

At the Moskwa, he displayed a fatal circumspection

* Campaign of 1813.

† Where Marshal Bessières was killed.

in refusing to allow his guard to march, when at two o'clock General Belliard came to ask it of him. The Russian army was then in the greatest confusion; immense results would have been obtained with fresh troops; one hour of respite saved the enemy.*

Napoleon was thus unfaithful to one of his favorite principles, which I have heard him repeat: "That those who preserve their fresh troops for the morning after a battle are almost always beaten." He added: "If it be necessary, the very last man should be given up; because on the morning after a complete success there are no more obstacles before us. Opinion alone insures new triumphs to the conqueror."

In the same manner, at Waterloo, Napoleon caused his guard to charge too late. If it had marched whilst the cavalry was performing prodigies, the English infantry would probably have been overthrown, and the French army, disembarassed of the English, would have been able to receive, fight and conquer the Prussians. †

* This is echoed by Thiers, (*Consulat et l'Empire*.) "At the great battle of Moskwa his hesitation to send his guard into action was probably the cause which prevented the complete destruction of the Russian army." But he afterwards extenuates the fault: "If at the Moskwa he did not make use of his guard, it was because he found it necessary to act cautiously in an enterprise of which he began to see the folly."

† He contemplated a last charge just before the forward movement of the allies. "Napoléon, ayant réuni dans ces entrefaites les six autres bataillons de la vieille garde détachés sur divers points, se dispose a seconder les efforts sur Mont-Saint-Jean, lorsque le

To sum up—**Tactics** may be defined:—the art of movements executed in presence of the enemy, using the formation which offers most advantages, and which is most in harmony with circumstances.

désordre qui commence à se manifester dans la droite du corps d'Erlon, le contraint a faire former ces bataillons en carrés.”—**JOMINI**, *Camp. de 1815*, p. 215.

CHAPTER V.

MANŒUVRES.

Manœuvres are the means by which the principles of tactics are applied. They consist in the art of moving masses, and of causing them to pass, without confusion and with rapidity, from the order of march to the order of battle, even in the midst of the fire,—and the converse.

Troops may fight and march in all the formations; but there are some preferable to others; certain of them for fighting, others for marching; and formations for battle vary also according to circumstances.

Thus troops are **deployed** when they are to receive the enemy, and he is marching upon their position—to subject him to an extended fire; otherwise he would approach almost without danger. If we are marching upon him, we may also deploy; but that is not without great danger, on account of the fluctuating character of a march in line of battle, and the disorder which may result from it. It is preferable, therefore, to have only a part of the troops deployed, and to alternate these with columns, which are so many compact points where the authority of officers will have less difficulty in maintaining order. It was with this formation that the right and centre of the French army in Italy traversed in 1797 the vast plains of the Tagliamento, in presence of the Austrian army.

The attack of a position requires the most rapid march, and, the space to be passed over being often bristling with obstacles, the troops should always be formed in column by battalions. These little masses are easy to move; they cross, without difficulty, all the defiles; the rear, less exposed to the fire of the enemy than the front, pushes the front forward, and thus they arrive at the point to be attacked the more quickly.

As a complement to this disposition of troops, a great number of skirmishers should precede the columns, and march in a direction corresponding to the intervals of the battalions, in such a manner as to divide the fire of the enemy, and to cover the deployment if it becomes necessary, without masking the heads of columns, which may immediately commence firing. The skirmishers thus placed will find themselves supported; they have rallying points, designated and within reach, and they can never be compromised.

The formation in square can be only accidentally made, and for the purpose of resisting, in an open country, the attack of a numerous cavalry. As this formation does not easily agree with the ordinary movements and with a combat against infantry, troops should be accustomed to pass as rapidly as possible from the deployed order to the deep order, and *vice versa*.

We have seen nevertheless, in Egypt,* troops formed in squares for the march, and for whole days at a time.

* MONTHOLON, (Dictations of Napoleon at St. Helena,) *Campaign in Egypt*, where the necessity of the formation is fully set forth.

But that happened from two causes:—it was desired to assure and inspirit the soldiers against the impetuous attacks of a new enemy, and to cover and secure the sick, the wounded, and the artillery.* A superfluous and almost ridiculous depth was given to the squares, by placing the men in six ranks. It is true that this was changed as soon as it was found that the precautions were exaggerated, and they were satisfied with a square of three ranks, and even of two; nor did they recur even to this formation except at the moment when they foresaw an immediate charge of the enemy.

In general, the march in square is detestable; however little it is prolonged, it leads to disorder; for the conditions of the march are not the same upon the different sides of the square, two sides marching in line of battle and the other two by the flank.

* Add to these the savans whom Napoleon had taken with him into Egypt: "They had been supplied with asses, the beasts of burden easiest attained in Egypt, to transport their persons and philosophical apparatus; and loud shouts of laughter used to burst from the ranks while forming to receive the Mamelukes, when the general of division called out with military precision, 'Let the asses and the savans enter within the square.' The soldiers also amused themselves by calling the asses demi-savans."—*Scott's Life of Napoleon.*

PART II.

THE ORGANIZATION, FORMATION AND MAINTENANCE OF ARMIES.

CHAPTER I.

THE ORGANIZATION AND FORMATION OF TROOPS.

The organization and formation of troops are by no means arbitrary undertakings; they have for their aim, to render compact a combination of men, and with them to form a whole, a movable unit: the rules to be established rest upon conditions determined by the faculties of the individual commander, and by the nature of the arms which he employs.

To form troops, the first thing to be done is to establish order and secure obedience. It is with this aim that a classification and successive ties have been conceived, which, combined with skill, oblige a great mass of individuals to submit to the action of authority.

FIRST SECTION.

INFANTRY.

We commence by forming a small mass, easy to govern; we then unite many of these masses, subordinating their commanders to a superior commander: in this case, the unit is no longer a man, but a number of men united.

Thus a **squad**, composed of eighteen or twenty men, obeys a sergeant, aided by corporals; the **union of squads** forms a **company**, which is commanded by a **captain**, aided by subordinate officers; and **many companies** form a larger mass, called a **battalion**. The commander of a battalion, in contact only with four, six, or eight men, commands through them as a medium, and thus acts upon the whole.

The **company** is the element of the organization, discipline and administration: the **battalion** is the true military element in the infantry; the unit for battle. It is by battalion that movements and manœuvres are made; it is by battalion that the fighting is done.

As to the numerical strength of a battalion, it may vary, but only within certain limits, which are prescribed by the very nature of things. We should not adhere to the letter of the proverb—"The God of hosts is on the side of the heavy battalions"—a proverb, moreover, which is doubtless understood to apply to large armies, thus designating the whole by a part. Two conditions are observed in the numerical composition of a battalion. It should be easy to move, and, when deployed, the voice of

the commander should be readily heard at both extremities of the line. Observing these limits, the number of companies, and the *personnel* of each company may be increased more or less, at will.

There is a proper proportion to be established in the number of officers and soldiers. That suggested by experience, as best uniting economy with good service, is— one officer to forty soldiers; or twenty-five officers to a battalion of one thousand men. It will be easily seen, that a great number of supernumerary officers has only the disadvantage of greater expense to the government; in every other respect they are useful, whether by multiplying the means of action, and of superintendence, and as models of courage, or by making an easy system of rewards, by more rapid promotion.

The effective force of organization differs also among nations. The strongest battalions are the Austrian, the weakest the English. The full number, in Austria, is over twelve hundred men; these are too many for good service. It is hardly possible, with such a number, to move with order and facility.

I see, however, an advantage in this arrangement: as losses in war are constantly occurring, and as recruits are often kept back, so large a battalion resists for a longer time; even a great diminution in its force does not render it unserviceable.

In France, we have habitually had weak battalions, and their effective force, even when entering upon a cam-

paign, is almost always below the prescribed number of the organization.

I will place, as the limit, one thousand men to a battalion; and that, because the number cannot be preserved entire, when it passes from a state of peace to that of war,—when it leaves the garrison to enter on a campaign.

As the result of constant observation, it may be said, that the corps best governed and in finest condition, undergoes at that period a diminution of one-fifth, *i.e.* of the men in the hospitals, the workmen who remain at the depot, the men belonging to the train, etc. etc. A battalion of one thousand men, has then no more than eight hundred men under arms; after a few months of the campaign it is reduced to five hundred, an effective force still sufficient in presence of the enemy.

The formation which is adopted for the battalion will also influence its numerical strength.

In all the continental armies the infantry is formed in three ranks; in England it is formed in two.* This latter formation seems to me far preferable. Nothing justifies the third rank.

Without entering into details concerning the firings, we may appeal to experience. *On drill* the firing may be by three ranks, but not *in war*. The French tactics prescribe that the musket shall be passed to the third rank, designing that rank only to load, not to fire. It is a

* The United States infantry are formed habitually in two, and for the reasons here presented.

theory not applicable when before the enemy, and a practical experience has condemned it to disuse. Fighting is done with musket firing when troops are in position. The best formation then is that which renders the fire most effective; which gives it the best direction, and greatest development. Indeed the third rank soon mingles itself with the two first: it takes instinctively the most advantageous formation; but the change being made contrary to order, brings with it a kind of disorganization. It would be better, for these reasons, to settle upon the formation in two ranks, and to render it permanent.

In placing the troops in three ranks, the design was to give them more consistence when marching in line of battle. But the means does not attain the end. Even in three ranks a line in movement is far from solid; and for a march in line of battle I would prefer a still deeper formation.

At all events, with a slight modification the formation in two ranks will fulfil all the required conditions. Thus:—

When in position, the troops have, by that very fact, a front half as large again. In marching in line, ploy the first and fourth divisions in rear of the second and third, and you will have four ranks, and at the moment of halting, you will present a front, less by a fifth, it is true, than that of the existing formation; but in two minutes it may be doubled. Here then, for the march, is a solid and compact formation, which will permit a battalion to fire

in every direction, in case of an unexpected charge of cavalry, which may have surrounded it, simply by an *about face*, executed by the first and fourth divisions, which have doubled on the second and third.

The formation in two ranks, with this disposition carried out when marching in line of battle, seems to me incontestably the best.

After the formation of the **battalion** comes that of the **regiment**. Here all is arbitrary, and depends upon the caprices of the organizing power. The regiment may be of two or three, or of four, five and six battalions; it is only a question of administration and economy.

The regiments composed of many battalions are less expensive, with the same number of men. There is economy in the organization of the staff, and in the advantages of a community of subsistence applied to the greater number. Such regiments have in general a better spirit, a regimental tone (*esprit de corps*) the more energetic, because there is a greater number of individuals honorably vying for reputation and glory. They have more brilliancy (*éclat*) too in the public eye, their force putting them in condition to execute, without aid, the greatest plans.

In wars of invasion, in occupying extended countries, regiments thus constituted may form echelons in order to gather together as they march the men who have lingered in the rear. These intermediate bodies receive the recruits, set them up, and thus act as feeders to the battalions which are in front of the enemy. In this manner a

great economy of men is attained, an economy not less important than that of money.

In general, the regiment is an essentially administrative formation. It is of the character of a kind of social constitution, animated by a patriotic and domestic spirit.

The colonel is the chief of this form of municipality, the father, and the magistrate; and without any desire to depreciate courage, the first of military virtues, the essential qualities of a colonel, those which most influence the excellence of a regiment, are less an extraordinary intrepidity, than a spirit of order and justice, and great firmness. The best corps are those which are thus commanded.

On principle, a regiment of infantry should be instructed for every kind of service; and the conditions and necessities of war require that it should have a light infantry which should belong to, and be part of it. Nevertheless special light infantry corps have been deemed useful, and I share this opinion. For vanguards, for detachments, in intersected and mountainous countries, there are wanted men endowed with special instruction, who know, by a peculiar instinct, how best to surmount obstacles, and who, drilled to the greatest precision and address, know how to deliver the deadliest fire.

But, according to my judgment, in no army have the true principles been followed.

In France and in Russia, there are regiments of light infantry; these bodies scarcely differ, either in name or in dress, from ordinary regiments of the line.

Recently, in France, the **Chasseurs de Vincennes** have been established. This is a good institution, but incomplete in so far as that the battalions which compose this corps are not divided into campaign battalions, and garrison battalions, according to the principles which I shall enunciate hereafter.

In Austria, there are battalions of chasseurs; in England, there are light infantry companies belonging to a regiment which never leaves its depot. These two organizations are worth more than our own; but even they have need of modifications.

The regiments of infantry have their **voltigeurs**. In this respect, one immediate want is already satisfied. By recruiting the **voltigeurs** from the centre companies, men may be chosen who are most in condition to render good service.

The special corps of light infantry should have numerical strength proportional to the needs of heavy vanguards, and mountain warfare. Regiments of many battalions are too strong for this service; and as it necessitates an extreme division of soldiers, one chief cannot command a great number. Such an organization should be adopted, therefore, as would present to the enemy only a strong battalion.

This would be done by having three strong companies. I would propose that a battalion of light infantry should consist of twelve hundred men, formed into six companies of two hundred men each, each company commanded by five officers. But it is not sufficient that these troops

should have special instruction; they should have more vigor and youth than the others; the choice of men is of the greatest importance.

If a new corps is formed it may be constituted in the most satisfactory manner; and yet, at the end of a few years, there will be, to govern young soldiers, a heavy official organization, (*cadre*), and the corps will have lost all its agility.

Light infantry corps should be composed of two battalions, the one of twelve hundred men, designed to be always maintained complete in numbers, and on a war footing; the other, of four companies, composed of from six to eight hundred men,—which I will call the garrison battalion,—designed to instruct recruits, to receive all the men yet in a condition for service, but who are no longer fit for the war of outposts, which requires so much vigor and youth.

I see another advantage in this disposition. There are thus placed in the hands of a general, very fine corps, which he may employ to garrison places or fortified posts, threatened by the enemy.

I know that it is always a painful resolution to station in garrison, a good regiment or a part of a good regiment, which is in a condition to take the field; but on the other hand it is both absurd and fatal to confide the protection and defence of such a place to poor troops. They surrender the place, at the first attacks of the enemy, and the general sees the prop (*point d'appui*) upon which he

depended disappear, at the very moment when most necessary to him.

In Spain, I twice suffered this painful experience General Dorsenne had formed the garrison at Ciudad Rodrigo* negligently, and that place, which had resisted for twenty-five days, of regular approaches, the siege of the French army, and the most powerful means, was taken in four days by the English, even while the army of Portugal was flying to its succor.

A little later, I had caused to be fortified, with the greatest care, the passage of the Tagus at Almaraz, in order to secure the communication of the army of Portugal with that of Southern Spain. Works reveted with masonry, joined with a redoubt, covered the left bank; advanced forts defended the only passage by which the enemy's artillery could débouche. This post of Almaraz was of the greatest importance; I had there placed garrisons of sufficient strength. But the troops were of a mixed character, and the poor troops were in the majority, particularly a German battalion called *Prussian*. The good troops occupied the advanced posts which defended the hill of Miravete. The enemy presented themselves unexpectedly; the English column which conducted the artillery was arrested, and could not pass. But another column, having passed by footpaths over the girdle of rocks which borders the elevated plain, arrived with scaling ladders, and attempted the assault. The least

* Vide Thiers, (*Consulat et l'Empire*.) January, 1812, where the details here referred to are given.

resistance would have been sufficient to repel such an audacious attack, executed in open daylight. The commander of the fort, Major Aubert, a very brave soldier, sprung upon the parapet to encourage his intimidated troops; he was killed; his death spread terror among his men, and the garrison fled to the other side of the Tagus, abandoning the fort to the enemy, who retired after having destroyed its means of defence.

SECOND SECTION.

CAVALRY.

In cavalry, as in infantry, the end to be attained comprises, order, obedience, facility of movement; but the manner of fighting and the nature of the weapons not being the same, everything differs in the application.

The fire-arms used by cavalry are a superfluous accessory; their most common use is as means of signals.

Cavalry is instituted for hand to hand fighting; it is to cross swords with the enemy, to shock, to overthrow, to pursue. To pursue an enemy is its habitual office; for it is rare that the two parties come into collision. Almost at the moment of contact, the less confident of the two halts, and then turns to flight.

The movements of this arm should always be rapid and impetuous; sometimes even—but only with small bodies—there may be a headlong movement which resembles imprudence.

The French cavalry is the finest in the world for fighting; its charges are fearless and thorough, (*au fond*.) It is sometimes indeed the victim of rashness; but in general, and upon occasion, what favorable results does such temerity produce!

In our first and immortal campaigns in Italy, how many thousands of prisoners were due to a mere handful of horse!

To command cavalry, where large masses are concerned, superior qualities and special merits are necessary. There is nothing so rare as a man who knows how to wield, conduct and use them appropriately. In the French armies, we can count but three in twenty years of war;—Kellermann,* Montbrun, and La Salle.

The qualities necessary for a general of cavalry are of so varied a nature, and are so rarely combined in the same person, that they seem almost to exclude each other.

The first thing to be mentioned is a sure and prompt *coup d'œil*, a rapid and energetic decision, which does not, however, exclude prudence; for an error made and a blunder committed, in the beginning of a movement, are irreparable in consequence of the small amount of time required to execute it. It is otherwise with infantry, whose march is always slow, compared with the movements of a general and his aides-de-camp.

* The younger Kellermann, whose famous cavalry charge, when Desaix was leading his division against the advancing Austrians, won the day.

The cavalry general should study to place his troops under shelter from the fire of the enemy, and at the same time to keep them in position; but to lavish them when the moment of attack has arrived. The evening before a battle, and indeed until they are called out to fight, he will watch over the comfort, both of men and horses, with minute care; he will foster these forces in all their valor, but when the moment has arrived, he must know how to launch forth that cavalry without regard to the chances of loss,—with the sole purpose of making the most of them.

A general scarcely ever fulfils in the same degree these two conditions. One, of excellent administrative powers, takes good care of his cavalry; but, too much occupied with this thought, he does not dare to launch them upon the enemy, and they become useless on the day of battle. Another, always ready to lead them into action, takes so little care of them during the campaign, that they perish of want before they see the enemy. To cite two examples: We might reproach Murat with that want of care; and the contrary excess may be charged to the general who commanded the cavalry of the Imperial Guard, after Bessières* was wounded, at Wagram. If the charge had been made at the time when the offensive movement of

* Jean Baptiste Bessières, (Marshal of France and Duke of Istria;) born in 1768; entered as a private in Louis XVI. Constitutional Guard in 1791. Captain of Chasseurs in 1796, at the beginning of the first campaign in Italy; rose rapidly; was Marshal of the Empire in 1804; Duke of Istria in 1808: gained the famous battle of Medina del Rio Seco in Spain: wounded at Wag-

Macdonald, sustained by the artillery of the Imperial Guard, had overthrown the Austrian right,—twenty thousand prisoners would have fallen into our hands.

Cavalry, when about to attack the enemy, and the men to fight hand to hand, should never fight in column. This formation will serve to facilitate its march; but at the moment of its approach to the enemy, it must be deployed. A column of cavalry surrounded, is soon destroyed; for there are very few of the soldiers who are within reach to use their arms. Cavalry when deployed should be formed into two ranks, so as to check the disorder which might occur in the first rank: it was formerly in three; but it did not require much time to manifest the vice of that formation.

The fighting unit is called a **squadron**: the rule, for determining its strength, is to unite the greatest mobility with the maintenance of order.

A **squadron** having too great a front would be easily thrown into disorder by the slightest obstacle, and every troop in disorder is half conquered. Experience proves that the best formation, that which most completely unites strength and consistence with great facility of movement, is a **squadron** of forty-eight files, divided into four subdivisions of twelve each. Subdivisions of from sixteen to

ram, 1809; killed at Rippach, the evening before the battle of Lützen, 1813.

The officer here referred to was General Walther, who, when entreated by Macdonald to charge with the cavalry of the Guard, said he could only receive orders from Bessières. As Bessières had been wounded just before, no orders were given.

eighteen files would also be proper at the beginning of a campaign, especially with light troops, where more active service and numerous detachments weaken the corps.

The inconsiderable number of men and horses permits that arrangement in the cavalry, which would be impossible in infantry: *i.e.* the fighting unit is the same as the unit of administration.

In general, perfection in the service would demand in every arm an organization which may be at once applied to the combat and to daily existence, that is, to the arrangement of barracks, to administration and manœuvres; an organization which should constantly keep the troop in the hands of the same commanders, and would thus give it more fixedness and power.

Formerly the squadrons were composed of two companies. One of the two captains thus found himself subordinate to the other; this was a vicious combination. He who commands should have a social superiority, constant and determined, over those who obey him. Such is the fundamental principle of a hierarchy. Nevertheless, we did carry on war with squadrons thus formed; but after the peace a serious discussion engaged all the best minds; the squadron company was adopted, and the soldiers, whatever their position and circumstances, always remain under the orders of one chief.*

* Lieutenant-General Prével, who, under the restoration, was a member of the council of war, and one of its luminaries, is the author of the principal ameliorations which were then adopted at the organization of the cavalry.—M.

There is, in the formation of cavalry in line of battle, a difference between the usages of the French army and those of the German and Russian. With us, the squadrons are at equal distances from each other; with the others, they are placed together—two and two; and form a division without interval. This formation, preserving the same mobility to the squadrons, gives more consistence to each point of the line; and, in that respect, there is an advantage; but, on the other hand, in the French formation, the front of the line is greater with an equal number of combatants, which causes an extension of the wings. I will not decide between these two formations, the advantages and disadvantages of which seem nearly balanced.

Cavalry is a necessary arm in war, to reconnoitre and to give news of the enemy's movements. Such is the duty of the cavalry called light; it is the sight and hearing of the army: without it a general is at every moment environed with dangers.

Cavalry is also useful in fighting, and especially to turn a victory to profit. Without cavalry, a battle gained gives no decisive result.

We put that to the proof in 1813, after having conquered, at Lützen and at Bautzen, the Russians and Prussians, with our infantry alone:* it is a general opinion that these victories were of great importance; but no real

* After the almost annihilation of the *Grande armée* in 1812, the most difficult task for Napoleon was to create a proper cavalry force. This accounts for their inefficiency at Lützen and Bautzen.

advantage resulted from them. A flying enemy can always be rallied, when we do not reach him rapidly, at the moment of his disorder.

Cavalry in battle have a double object: 1st, to fight the enemy's cavalry, and to pursue the conquered army; 2d, to fight against infantry drawn up to resist it.

To fight against infantry, there is needed a **heavy cavalry**, barbed with steel, and sufficiently covered or sheltered from the fire, to attack it without fear. They should be armed with lances and sabres; each man should have simply a pistol; there is no need of other fire-arms, except a prescribed number of carbines to each squadron, so that every regiment shall have the means of informing itself when it is isolated.

There is a fourth kind of mounted troops, of very ancient institution,* and whose nature has been altered, it is difficult to say for what reason; I speak of **dragoons**.

In the beginning, they were only mounted infantry; they should always have preserved that character. With this condition dragoons may, in a thousand circumstances, render immense service: in detachments, for surprises, in retrograde movements, and principally in pursuits. But it is necessary that, in conformity with their establishment, they should be mounted upon horses too small to be put into line; otherwise, the aspirations and ambition of the

* It was Marshal de Brissac, who in the sixteenth century, during the wars in Piedmont, established the first corps of dragoons, and found great advantage in their use.—M.

colonels would soon change them into cavalry, and they would become at once bad infantry and bad cavalry.

A troop should have its creeds, its convictions, its faith, the resultant of sacred principles and even of prejudices, which are inculcated in their minds. But the intelligence of the soldiers must not be confused, by professing in their hearing opposite opinions,—by saying in a solemn manner—when they are exercised as cavalry—that cavalry must always triumph over infantry; and, when the moment for exercises on foot arrives, to teach them by counter-comment that a good infantry is invincible by cavalry. When applied, the axioms recur to the mind of the soldier almost always in an inverse application. As a foot-soldier he remembers to what extent the cavalry is the formidable arm; as horseman, he does not forget how much infantry is to be feared by cavalry.

I repeat,—nothing is more useful than the establishment of dragoons; but they must not be perverted.

The horses should be small, as has been said; their equipments, as well of men as of horses, should be solely calculated for the commodious and rapid service of a real infantry, armed with good muskets having bayonets, and well provided with ammunition. The dragoons should also be clothed and shod for ease in marching.

As to the cavalry, properly so called, cavalry of the line and cuirassiers, I would arm them with lances, and half-curved sabres, fit for the double purpose of pointing and cutting, and with a pistol: in each squadron, there should be twenty breech-loading carbines.

I have elsewhere considered the subject of the lance; and that I may not impair the unity of the matter, I will bring together the arguments which recommend that arm, "the queen of arms," according to the expression of Marshal Saxe.

I shall begin, however, with the remark, that it is in nowise a fit weapon for light cavalry, who having to defend themselves against numerous enemies at the same time, should be provided with fire-arms and with sabres. Notwithstanding, it is light cavalry which has been armed with the lance, in those countries into which it has been imported.

But we know with what facility new usages are adopted; in the most civilized countries the authority of example induces a blind confidence. We do not go back to the origin, nor to the circumstances which elucidate it; we do not consider essential differences; and hence we have faulty and undigested applications. Thus,—whence comes the improper employment of the lance in the arming of mounted troops? From the examples set to us by war-like hordes, such as the Cossacks and Arabs. These tribes inhabit plains where horses are abundant; they fight without instruction and without rule, and throw the lance with wonderful effect. It has therefore been said—considering them as light troops—the lance is the weapon for light cavalry.

The origin of this weapon has not been sought for, nor the reason why these tribes make so skilful a use of it.

In a barbarous country, where industry has not yet

penetrated, where there exist neither manufactures of arms nor armories, nor the money to buy them abroad, a man mounts his horse, and wants a weapon; he cuts a long branch from a tree of light wood, sharpens the point, hardens it in the fire, and that is the lance. A little later, he procures a large nail, and puts it at the end; his weapon becomes a more dangerous one. Finally, this rod is furnished with an iron tip, regularly fashioned, and behold the lance which our troops have adopted.

It is not of their own choice that the Cossacks and the Arabs arm themselves thus, but from necessity. And if they have become formidable by their skill in handling the lance, it is because they have used it from their infancy.

Nothing, with regard to light troops, specially organized in a civilized country, should be concluded from such examples.

The lance is the weapon for cavalry of the line, and principally for those destined to fight against infantry. The sabre cannot supply its place: armed with sabres, what use could cavalry make of them, if the infantry remain firm, and are not struck with fright? The horseman cannot sabre the foot-soldier; the bayonets keep the horse at too great a distance. On the other hand, let the horse—which remains the only offensive arm of the cavalry soldier—be killed; he falls and opens a breach, and that breach gives to those nearest to him the means of penetrating the ranks. The strife is then entirely to the advantage of the infantry. On the contrary, suppose the same line of cavalry, furnished with a row of pikes which

stand out four feet in front of the horses ; and the chances of success are very different.

But the **sabre** is more befitting than the **lance** for **light troops**. In hand to hand conflicts, a short weapon is handled more easily, and is more advantageous than a long one. All other things being equal, it is certain that a huzzar or a chasseur* will beat a lancer; they have time to parry, and return the blow, (*riposter*,) before the lancer, who has thrown himself upon them, can recover himself for defence.

The sabre designed for light troops should be slightly curved; that which is perfectly straight is of less value for single combat.

The same troops should also be provided with fire-arms, whether as additional means of resistance, or to make themselves heard by the main bodies, for whose behoof they are sent to scout and reconnoitre.

With regard to cuirassiers, and all cavalry of the line, it would be proper to arm them both with the lance and the straight sabre. The first rank would then charge with the lance in rest; the second with the sabre in hand. Once the shock is made and the ranks mixed, the sabres of the second rank would do their office.

* Lord Ellesmere, in the Quarterly Review for June, 1845, questions this assertion. He says: "If by 'toutes choses égales' be meant that the parties opposed shall have had nothing but the usual regimental instruction in the use of their respective weapons, we have no doubt that the Marshal is right; but we also believe that the lance is by far the superior weapon in the hands of a horseman bred and trained to its use." The reviewer is borne out by facts.

In the days of chivalry, battle was given directly in front; the charge was a direct one: the long weapon was of course preferable then; which explains to us the use made by knights of their lances.

I will cite a fact, in support of my opinion, concerning the manner of employing the lance, and obtaining the greatest effects from its use.

In 1813, at the battle of Dresden, our cuirassiers had made many charges on the left of the Austrian army, upon their infantry, which had been abandoned by the cavalry. The infantry steadily resisted; they repulsed our attacks, although the rain had put all their guns in such a condition that they could not fire. We could only overcome that resistance, by causing fifty lancers, who formed the escort of General Latour-Maubourg, to precede the cuirassiers; the lancers made a breach; the cuirassiers were able to penetrate and to make general havoc. It is true that the fire of the infantry was very feeble; but, under any other circumstances, the question would not have been uncertain, if the cuirassiers had been armed with the formidable lance.

The lance is equally successful in combats with cavalry, line against line, when the enemy has only sabres. It is admirable at the moment of attack. It is useful also in pursuit.

In a word, I feel authorized to say that, for cavalry of the line, the lance should be the principal weapon, and the sabre an auxiliary arm: that, for light troops, the equipment should consist of sabres and fire-arms. Doubtless

custom and prejudice will long contend against these principles, the truth of which I think nevertheless has been fairly demonstrated.

The Russian army possesses an immense advantage over all the other armies of Europe. The Cossacks, belonging to it, form a light cavalry, excellent, indefatigable and intelligent; they know how to find their way in trackless places, (*s'orienter*,) with precision, thoroughly to reconnoitre a country, to observe everything, and to take independent care of themselves.

They cannot be compared to any light troops, systematically instructed for that service: they are formed by nature; their intelligence is developed by the daily wants to which they are subjected. I speak of the Cossacks of the frontier, who, constantly at war with their neighbors,—always in presence of a skilful and enterprising enemy,—are obliged to be, at every moment, on the alert for their own safety.

The Cossacks of the Don, formerly admirable, have become less excellent, less intelligent, since their country has been covered by conquered provinces. But there are still large numbers of Cossacks guarding the frontiers of Asia; on the Kouban, upon the line, on the Therac, and east of the Caspian. Russia can prepare, and lead into Germany, more than fifty thousand of this cavalry, which will leave all the regular cavalry to be carefully cherished and strengthened, against the day of battle. This circumstance warrants us in considering the Russian hussars and chasseurs as cavalry of the line, and forbids their

being used as light troops; for from want of habit and exercise, it is certain that they know nothing of those exercises which the Cossacks execute so well.

Austria ought to have something analogous to the Cossacks, not however on a great scale. She should be able to procure easily ten thousand troops of this kind, by forming a corps of five hundred horse in each frontier regiment. I do not understand why, in that country, where everything is arranged with so much care, where the organizations are so judiciously made, (*raisonnées*,) they have not yet attempted anything like this.

France, when she shall have subdued Algeria, will be able, without difficulty, to raise Arab troops, who, in time of war, will render incalculable service. To attain this end demands a constant solicitude on the part of the government; and it would be well, at the present time, to increase, as much as possible, the number of indigenous troops, so as to have a mass of men attached to the glory of our arms; habituated to mingle their interests with ours, to rejoice in our success, and fit to furnish good non-commissioned officers, the need of whom would be more and more felt in proportion as their organization should be extended.

Cavalry being designed for hand to hand fighting, it is asked why more care is not taken to cover the men from the enemy's fire. A very little would suffice to protect them from a sabre stroke, or from a lance, or even to deaden the force of a musket-ball, fired from a distance,

or a pistol shot.* The Orientals, whose combats are always of the nature of *mélées*, have at all times taken this precaution; they are often clothed in coats of mail. The breast might be protected by a buff coat, of such stuff as the Castilian peasants wear; for the head, the shako should be reinforced on the inside by two cross pieces of wood, as is commonly practiced; the limbs should be protected by one or two light iron-chain works, placed outside upon the sleeves and the pantaloons. This double cuirass of buff, festooned and adorned, would form an elegant dress, which would bring to mind that of the Roman soldiers. This light and warm dress,—which favors health, by shielding the soldiers from the disagreeable effects of sudden changes of temperature,—might be equally appropriate for the infantry of the line. Were this adopted, the ordinary dress would be a short-skirted loose coat, like that of the cuirassiers; and the buff coat, worn only when under arms, would be the signal for service.

I will add a word, concerning the instruction of cavalry, which has always seemed to me incomplete. Too much importance cannot be attached to skill in horsemanship, (*equitation*,) nor can there be too much care taken, to render the men perfect masters of their horses. The man and his horse must form but a single individual, which shall realize the fabulous Centaurs.

* The author wrote from the experience of a long period, now suddenly passing away under the influence of improvements in fire-arms. Rifled muskets and rifled cannon make all attempts to cover the person of the soldier fruitless. War is proportionally more destructive.

Equitation is everything. It is what subdues the horse and tames him. The manœuvres will always be sufficiently correct, if the soldiers are good horsemen. Encouragements of every kind should be held out to further this object. The troops should be accustomed to charging to the enemy's centre, without being particularly careful to preserve a certain order, incompatible with this impetuosity, which is the best means of beating the enemy; but, at the same time, they should be habituated to rally, at the first signal, with promptness and dexterity. They should be constantly placed in these circumstances, that they may be prepared for them by all necessary means. Thus the apparent disorder of the charge will have no influence upon their morale.

On the other hand, if the charges, while under instruction, be feeble and moderate, they will be less powerful still, when before the enemy, and will never overthrow him; and, at the first disorder, the soldiers will think themselves lost.

There is a usage often practiced at drills, great evolutions, and sham-fights: the cavalry is made to charge upon the infantry; and in consideration of its being only a simulated combat, the cavalry is halted before having reached the infantry, or it escapes through the intervals. Nothing can be worse than this kind of education for the horses; being thus accustomed to avoid the point of attack as an obstacle, they can never be made to come to close quarters, for their habits accord with their instinct, and perhaps with that of their riders. This practice is

pernicious; it should be banished from the drill, and replaced by an entirely different lesson. The war results would be immense. I understand it thus:—

Place a line of infantry opposite a line of cavalry; give such distance between the files in the two lines, that a horse and a man may easily pass between them. The cavalry waver at first, even at a walk, but they pass through the infantry; they try it again and again, many times at a trot and at a gallop, until the horses execute the movement, so to speak, of themselves. The movement is then accompanied with a few musket shots, along the whole line, increased in number as the instruction proceeds; and if it be desired to increase the noise, the infantry files may be formed in six ranks, and the noise of the firing is then equal to that of a whole battalion.

After many days of similar exercise, a cavalry corps will be better fitted than others, not thus instructed, to attack infantry, and the horses, well set up and accustomed to precipitate themselves upon a fire which they have learned to face, will of their own accord carry their riders along, if the latter should be tempted to moderate their ardor.

CHAPTER II.

ARTILLERY.

THE third arm, now become indispensable in war, is artillery. It is of capital importance. But its use depends particularly upon its organization and the principles upon which it is constituted.

I shall try to lay down those principles, and develop their consequences. I will commence with the *materiel*; I will afterwards pass to the means of making the best use of it.

The simplest artillery is the best. If the same calibre could satisfy all wants, and the same carriage serve for all transportation, that would be the perfection of the service.

But this cannot be: artillery is to produce very various effects; these effects being given, the problem is to determine the corresponding calibres, limiting their number to the absolute necessity of the case; for whenever two calibres serve the same purpose, there is one too many, and it is moreover injurious on account of the complication which it produces, in munitions, stores, and substitutions.

Artillery should be divided into three kinds;—1st, siege and sea-coast artillery; 2d, field artillery; 3d, mountain

artillery. In each of these divisions, and, in spite of the difference which necessarily exists in the weight and dimensions of cannon, the same calibres should be adopted, as far as possible, so that the same munitions may be used.

In siegès and in the defence of fortified places, such pieces are needed as will destroy men, dismount the enemy's guns, and carry to a great distance. Experience has demonstrated that the 12-pdr. gun perfectly accomplishes these objects.

In this kind of war, ramparts are also to be destroyed, crumbled away, to open a practicable path by which to penetrate into the place. In this view it is no longer a murderous weapon; it is a utensil, a machine, the battering-ram of the ancients, rendered still more powerful and more expeditious. To produce this effect, the 24-pdr. is absolutely indispensable. The 16-pdr., formerly in use, was superfluous; in the one case insufficient, in the other excessive.

Field artillery is intended to follow the troops in all their movements, and to arrive promptly at a prescribed point, to crush the enemy. To this end we need a light material, of easy transport, and very easy of movement, so that no obstacle of ground can arrest its progress. I should consider a sufficient calibre that of the 6-pdr., in use throughout Europe, and which I caused to be adopted when I was at the head of the French artillery. With this calibre all the wars of the Empire were carried on. We have returned to the 8-pdr.; no doubt its superiority

gives some advantages; but it has the great disadvantage of increasing the munitions one-third in weight, and of thus rendering necessary more considerable means of transportation,—means always lacking in war.

A second object to be accomplished in field wars, is to produce great effects by the aid of powerful reserves; to silence the fire of the works in temporary fortifications, upon which the enemy is resting; to arm such works when constructed by ourselves; to breach walls not properly embanked; to protect the passage of rivers. For these purposes 12-pdrs. are certainly necessary; but not so heavy as those employed in sieges or in the defence of places. In fine, there may properly be in the train of armies one or two batteries of 24-pdrs. short, designed to be fired with charges weaker than a third of the weight of the ball, and which, in a thousand circumstances, will render splendid service on the day of battle.

The calibres, as we have just seen, should then be proportioned to the effects to be produced; and notwithstanding the great number of these, they may be reduced to three, by varying the dimension and weight of the pieces. But this is not all; we also employ hollow projectiles, shells and howitzes; their calibre, as far as possible, should be the same as that of cannon; and this offers no practical difficulty.

Howitzes of $5\frac{1}{2}$ inches diameter, having the same diameter as 24-pdr. balls, are everywhere adopted, with the advantage of serving indifferently in howitzers or guns. A larger calibre has appeared useful for siege

howitzers; and the proper system has been observed, in giving them a diameter of 8 inches, allowing the use of these howitzes in 8-inch mortars, of which great use is made in the attack and defence of fortified places.

Afterwards come the other mortars of greater calibre. Here the larger the calibre, the greater the effect. The expense and the difficulty of transporting munitions are the only arguments against their employment. The mortars, designed to receive a very heavy charge, cast upon a broad plate which supports them, and to which my name was formerly given, as well as those named *à la Villantroy*, are only applicable to the defence of coasts, because of their immense weight, and because they are especially designed to carry to a very great distance, which is useless in sieges and the defence of places.

Further on I will speak of a newly-invented artillery, and it will be seen that the principle of uniformity of calibre has been retained in arms employed for different purposes.

The calibres of which I have just spoken are then the only ones which are necessary for use in sieges and for field service.

There now remains the artillery useful in mountainous warfare. Without entering into details, I will say that it should be composed of pieces sufficiently light to be carried on the backs of mules: larger pieces, such as are transported on sledge-carriages, are more embarrassing than useful. *Congreve rockets* are also eminently fitted

to be employed in the mountains. I will speak presently of this invention.

There is still to be mentioned an arm from which may be obtained great results; these are wall or rampart guns, only lately invented, which load at the breech, and throw a ball weighing several ounces, with very great precision of aim, and with a range similar to that of pieces of small calibre. These guns, distributed to the number of ten or twelve to a regiment, and carried habitually with their ammunition, upon a single carriage, would be, on occasion, of extreme utility.

After having spoken of the calibre of cannon, and the motives which induce a choice, it will be proper to say one word of the other dimensions and the weight of pieces. The determination of these is not arbitrary; it springs from positive circumstances, which have a direct influence upon their utility.

The length of a cannon is relative to the charge to be used. We do not confine ourselves to the precise limit which experiments have demonstrated as that which will give the greatest range. To avoid other disadvantages, this limit has not been regarded as absolute; but we approach it as nearly as possible. The gas formed by the combustion of the powder, and the explosion of which produces the force which impels the ball, acts as a resisting force.

Now to the extent to which it acts upon the ball when in motion, it augments the force which follows it, and, consequently, the range: this action is the result of the

combustion. If the combustion be not finished when the ball has left the piece, there is a diminution of the range; if it be prematurely finished, and the ball receives the entire impulsion from it before having passed through the length of the piece, there is also a diminution of range; but in the latter case it is the friction which occasions it. The quantity of powder should be such that the expansion of the gas which it produces in burning, shall accompany the ball, from the bottom of the piece to the muzzle of the piece, no more nor less; and so, with long pieces, there must be stronger charges, and, with short pieces, weaker charges.

In France there has been adopted, for cannon, a uniform charge, represented by the third of the weight of the ball. With this condition a series of experiments has been made, to determine the length which will give the greatest ranges; and pieces, thirty-five calibres in length, have been cast.

After having verified the range thus obtained, the piece has been sawed off at the chase, so as to diminish its length one calibre; the range is then greater. The operation is renewed, and the result has always been the same, until a length of twenty-seven calibres is reached; passing this limit, to twenty-six calibres, the range has been found to be in a diminishing scale. It is then properly concluded that with a cannon of *twenty-seven* calibres in length, and a charge of one-third the weight of the ball, the maximum of range is obtained.

But it is difficult to manœuvre pieces of this length;

and, to remain within medium limits, there has been adopted for siege and place guns, a length of twenty-two calibres. For field-pieces, which require a still easier and prompter manœuvre, this length has been reduced to eighteen calibres, and some foreign nations have fixed it at fourteen.

I do not speak of howitzers: this is a particular arm designed for firing in ricochet, established upon other principles, and must satisfy other conditions.

I will now make a remark, founded upon a well-authenticated fact, the application of which is important, and which seems astonishing. The powder should burn rapidly, but not instantaneously; otherwise the force of inertia would cause a violent shock, which would destroy the arm itself. Its action should be successive; a special fact has given me the means of acquainting myself with this phenomenon.

General Rutti, an officer of great merit, placed at the head of the government works of powder and saltpetre, had succeeded in making powders of extraordinary strength; and he thought he had obtained a most important result. Five hundred thousand pounds of this kind of powder had already been made, and it was thought desirable to reserve it as a precious thing for the uses of war. An official circumstance happily changed this design. The new powder was issued to be used at the drills of the guard, in 1828. In two schools of practice, all the cannon were burst and rendered unserviceable. These facts being established, I sought for their cause: there

was no other explanation than that which I have given. It is a verification of the adage:—"Better is the enemy of well."*

As to the weight of pieces, it may be diminished in a very considerable manner, and without disadvantage as respects the resistance; but the carriages suffer greatly, and are easily broken. The force of the recoil, spending itself upon too light a mass, produces a sudden and destructive shock. After a certain limit, a pound of metal taken away from the weight of the piece should be added to the carriage which supports it.

That fact will be made clear by the following example, which every one may have daily before his eyes. A juggler will place upon his chest a stone of great weight, and he will brave the effect of a blow from a war-club, whilst, with a stone of less weight, he would be injured by it.

In 1802 and in 1803, when I was working to establish the new system of artillery, which was afterwards used during the entire period of the Empire, the experiments which I directed, upon the weight of metal, demonstrated that the proportion which equally satisfies the conditions of mobility and preservation, is *one hundred and twenty* pounds for every pound in the weight of the ball, provided the charge be one-third the weight of the ball.

The English attach great importance to the lightness of guns for horse artillery. They do not give, or, at least

* "Le mieux est l'ennemi du bien" or, in our own homely adage,—“Let well enough alone.”

they did not give, thirty years since, more than *ninety pounds* for every pound in the weight of the ball; but it must also be observed that they reduced the charge to a quarter, instead of a third.

One word more concerning the *materiel*. Carriages of various kinds are necessary elements of the artillery service: use injures them, destroys them, and new ones are constantly necessary to replace them. Hence the great advantage of a perfectly uniform construction. De Gribeauval, first inspector general of artillery, author of the first regular system, claims the glory of having established this uniformity. Thus, the fragments of a carriage, constructed at Auxonne or at Toulouse, could be used to repair a similar carriage made at Strasbourg. But subjected to the influence of officers of artificers,* their pedantry has led them to adopt, in construction, fruitless divisions and subdivisions, and thus in a systematic manner great embarrassments have resulted, almost equivalent indeed to the confusion from which we had just emerged.

To give an idea of this, I will only cite one single fact which has remained in my memory. There were, as well as I now remember, twenty-two kinds of wheels in his system of artillery. I reduced them, in the system of 1803, to ten. At the present time we have come down to four or five; and I believe that this kind of *materiel* has

* *Officiers d'ouvriers (d'artillerie.)* There are in the French service military artificers—*ouvriers*—whose duty it is to construct all kinds of military carriages, implements and machines.

never reached the same perfection. In the next war fifty cannon well commanded will produce more effect than one hundred, such as they formerly were.*

In my encomiums upon the new artillery, I only except the 8-pdrs., which has been resumed, and the exaggerated weight of field-pieces, recently fixed at *one hundred and fifty* pounds for every pound in the weight of the ball.

But the best *materiel* in the world will be of only moderate effect, if it is not in the hands of men capable of producing, with it, its greatest results; and as remarkable as had always been, in France, the instruction of the corps of artillery, there were many things wanting: its organization was very imperfect.

The signal disadvantages have been successively remedied, and now all the conditions for producing the best service seem to have been satisfied.

The unit for battle, in the artillery, is the **battery**. It is composed of six or eight pieces, always marching together, with their munitions, and placed under the same command. It is to the artillery what the battalion is to the infantry, and the squadron to the cavalry. This corps should then be homogeneous and compact; the elements which compose it should have the same spirit, and the habit of being together.

Now, there are three distinct elements: the *materiel* or

* Marshal Valée, formerly central inspector of artillery under the restoration, is the author of that splendid system of artillery in *personnel* and *materiel* now adopted in France.—M.

arm properly so called, those who use it, and those who transport it. If these elements do not agree, the artillery is imperfect.

The first merit of artillery—after the courage of the gunners and the exactness of their aim—is its mobility. It is thus seen how important is the management of the horses provided to draw the cannon.

In earlier times everything was divided; the guns remained at the arsenal or in the park, until the moment of fighting; the horses belonged to a contractor, and the drivers were his servants, treated without consideration, having no prospect of promotion, and called by the name of *artillery drivers*. We made all the campaigns of the Republic with this monstrous organization.

Under the Consulate and during the Empire, this service was ennobled, and the corps of artillery drivers (*corps du train*) was formed with its non-commissioned officers and officers. There was thus a prospect of promotion, and the name of *driver* was replaced by that of *soldier of the train*. My influence was direct upon this organization, which was indeed, in great part, my own work; and to the end that the rights of different grades should not clash as to command, I was careful to give to officers of the train only grades inferior to the corresponding grades in the artillery corps.

In this manner was prevented—which is indispensable—all embarrassment and conflict in the relations between the commanders of batteries and those who conduct them. As to the latter, for lack of sufficient instruction,

never being designed to exercise higher authority, this difference in the grades will always keep them, naturally situated, according to the order of military rank, in a station of obedience. This organization lasted during the entire time of the Empire. At the end of the restoration, the council of war of which I was one of the vice-presidents under M. le Dauphin, changed the organization of the corps of artillery. They divided it into batteries, having their *materiel*, their cannon and horses, conducted by cannoneers of the second class, who are at the same time instructed in manœuvring and serving the cannon, and who are called *cannoneer-drivers*. This organization has certainly attained to perfection.

There have been created, within a few years, two kinds of artillery, the effects of which, in my judgment, are wonderful, if their use can be fully developed in the next war: **Congreve rockets** for field service, and cannon called **Paixhan**, for the defence of coasts and cities. I firmly believe that the power of resistance of fortified places will be increased by their use. The mode of warfare and the organization of armies will experience also a great modification. But these two objects deserve a more particular development.

The part played by artillery in war, has daily acquired more importance by reason not only of its increase, but also of its great mobility, which permits an almost infinite combination of movements. Nevertheless, there are limits to this mobility, which gives us the means of assembling

upon a given point a great mass of artillery. The number of guns proper for a given war is equally limited, by reason of the expense and the embarrassment of transporting a surplus of *materiel*, such an embarrassment indeed as might, in marches, more than counterbalance, in disadvantages, the advantages which might be expected of them at the moment of action.

Experience has demonstrated that the maximum should be four pieces for a thousand men, a proportion moreover which will be soon found to have been exceeded, after a few months of campaign; for the *materiel* is not subjected to the same causes of diminution as the infantry and cavalry, and the *personnel* of the artillery, so small in numbers, is always easily maintained complete.

But the **Congreve rockets**, which have progressively been brought to great perfection, and are now discharged with sufficient precision of aim, form a kind of artillery, which may become a principal arm, by the development of which it is susceptible in its application.

Indeed, when the arm is composed solely of the projectiles which are employed; when no machine is necessary to discharge them, and when they do not present to the enemy's fire any surface upon which to draw his discharges; when finally, by very simple dispositions, there may be given to this fire a development so great that the front of a single regiment may be subjected to a rain-storm of balls, representing the fire of a battery of one hundred cannon; then the means of destruction are such that there is no struggle possible, in following the rules

and the principles which the present art of war has established.

The following is my conception of the employment of Congreve rockets:—I would cause, in each regiment, five or six hundred men to be instructed for the service of this new arm. Two wagons would suffice to carry one hundred frames, (*chevalets*,) such as the Austrians have adopted; and at a given order, these hundred frames, each served by three or four men, would deploy a fire of which we can scarcely form an idea.

To such a fire as this, could masses be opposed, even of troops in battle array, upon many parallel lines? Assuredly not. Now, the advantage in battle consists in making the enemy fall back; we must then march upon him, cross the space which separates us; and to do it with the least danger possible, we should employ the arm which may be carried most rapidly over this space. On this account cavalry is the best; and this cavalry itself will be subjected to a new kind of manœuvre, so that it may present itself to the fire of the enemy with the fewest chances of destruction. Thus it should be dispersed as skirmishers, ready however to reunite at a given signal, to prepare itself for the shock which must follow the completed charge. Then the infantry changes its function: it becomes the auxiliary of the Congreve rockets, or rather of the rockets now become its own weapon, the muskets being for the time only accessories.

In this new system, infantry has need of an entirely dif-

ferent instruction. It should be divided into two parts: the first armed with the rockets; the second designed to place them upon the frames, to serve them at the rallying point, at the moment when they shall come in immediate contact with the enemy. Then the proportion of the arms (infantry and cavalry) must be changed. There should be more cavalry and less infantry; a cavalry drilled in an entirely peculiar manner, and an *infantry-artillery*, if I may thus express myself, the functions of which should be limited to serving the rockets, to carrying them and aiming them, to the occupation of entrenched posts, to the defences of fortified places, and to mountainous warfare.

But this new artillery acquires great importance in a thousand circumstances where cannon can play no part whatever. In the mountains, we transport, at the present time, with great difficulty, a small number of pieces which can there be of little effect. With rockets, we have an arm of long range, which may be established everywhere in profusion, upon rocky-summits, as well as upon lower plateaux. On level plains every building is transformed into a fortress, and the roof of a village church becomes, at will, the platform of a formidable battery. In a word; this invention, such as it is, and with the perfection to which it may yet be carried, is applicable to all conditions, bends to all circumstances, to all combinations, and must assume an immense ascendancy over the destiny of the world.

Served by a special corps, considered purely asartil-

lery, the rockets would be necessarily rare, and could produce but little effect. But an immense development is the only useful manner of employing them, the only means of astounding, of overpowering, of overthrowing as with a thunderbolt: they must therefore become the weapon of the army, properly so called.

We reflect only little by little upon the nature of things. We act for a long time by routine, without concerning ourselves with possible modifications and ameliorations; thus it will only be with time that we shall be able to appreciate the power of Congreve rockets. But if, in the next war, a skilful and calculating general should have a glimpse of the question in all its developments, in all its consequences; if he should prepare his means in silence, to display them upon the field of battle, he would obtain a success which would defy resistance, until the enemy should avail himself of the same means. At the moment of this grand experiment, the personal genius of the commander would attain a great ascendancy over the fortune of the war.

Nevertheless, as rational and plausible as the result which I predict may be, experiment alone will establish, in an incontestible manner, the merit of this new invention.* The wise man can only have absolute conviction, after facts have realized his hopes, as there are so many

* The Congreve (war) rocket was only invented in 1804, when Sir William Congreve changed the paper case for one of iron, and armed its head with a shot or shell, thus making what before was a pyrotechnic toy, or, at best, a signal light, a destructive weapon of war.

unforeseen circumstances which modify the best founded calculations, the most seducing probabilities.

However, such are the appearances, that a skilful and enlightened general ought in the very next war to prepare for using this new arm, and for astounding the enemy by its effects. If he alone uses it, he will probably be master of the campaign; and, if his adversary has been as vigilant as he, he will at least secure himself against a defeat. But his foresight must embrace all the consequences of this new means, relatively to the other arms, to their proper proportions, to their manœuvres, and to the manner of using them.

After the successful employment of Congreve rockets in a campaign, it is evident that they would be adopted in all armies; then the equilibrium would be re-established, and there would no longer be an exclusive advantage for either side. But the art of war would, by their use, be powerfully modified. The most vigorous combats, and those producing the greatest moral results, would render battles shorter, would diminish the effusion of blood: for that which gives victory is not the number of men killed, but the number frightened.*

I repeat it, Congreve rockets must produce a revolution in the art of war; and they will assure success and glory to the genius who shall have been the first to comprehend their importance, and to develop all the advantage which may spring from their use.

* “—car, nous n'avons tous qu'une certaine dose de courage, qui s'évanouit à l'aspect des dangers renaissants.”—*Rogniat*, p. 206.

I come now to the consideration of **Paixhan artillery**.*

The heavy artillery, to serve its purpose, should have a great range, and the projectiles which it throws a great momentum. Now to obtain this momentum, one of two things is necessary; either the velocity must be very great with a moderate mass, or the mass must be great with a less velocity; for the momentum of a body is equal to the mass multiplied into the velocity.

Up to the present time, the smaller mass, with considerable velocity, has been preferred, on account of the difficulty of transporting heavy projectiles; but if this has been right with respect to sieges, where the transportation is to be made in short and definite times, it has been wrong under other circumstances which allow an unlimited time, or which permit easy transportation, whatever be the weight. In a word, for the defence of fortified places, for the armament of sea-coasts, and for the naval service, this artillery possesses immense advantages, which I proceed succinctly to analyze.

1. The resistance of the air to the motion of the body being proportional to the square of the velocity, it is less with these heavy projectiles; and, therefore, the range and the accuracy of aim are greater. Supposing a velocity of twelve hundred feet in a second, with the ordinary ball, and of four hundred with the Paixhan ball, the resistance of the air would be $:: 9 : 1$.

2. The momentum of a twenty-four pound ball, with a

* The Paixhan gun, named after the inventor, is a large howitzer throwing very large balls and shells.

velocity of twelve hundred feet, will be represented by the number 28.808, while that of a Paixhan ball, of twelve-inch calibre, or weighing one hundred and forty pounds, with a velocity of four hundred feet, would be expressed by 56.000; that is, it would be nearly double. That of a thirty-six pounder, with the same velocity of twelve hundred feet, would be 43.000, and thus in proportion more and more feeble.

3. The destructive force being in the ratio of the surfaces, *i.e.* to the squares of the diameters, the proportion here will be as 1 to 4.

4. Finally, the thirty-six pound ball will pass through the epaulment* of a land battery, or the sides of a vessel, or it will bury itself in their thickness. It matters not where it lodges, it will produce no damage: and if it passes through the planking, the hole which it makes is easily stopped up; but a Paixhan ball produces far greater ravages. First of all by its great diameter and the slowness of its motion, with equal momentum, the effect being in the inverse ratio of the velocity, it demolishes a greater surface; then in striking it makes an immense breach: if it is a battery which it has struck, it must be reconstructed; if a vessel, she goes to the bottom, without a chance of saving her.

To defend a fortified place by such means, elevates the defence almost to the character of an attack; and the employment of this arm against ships at sea, would

* Any elevation of earth, thrown up to cover troops, is so called; but in this connection an *epaulment* is the parapet of a battery.

make squadrons disappear, and great vessels especially. Indeed, the superiority of a ship-of-the-line over a vessel of inferior size has two causes: the former carries a battery which the armament of the frigate cannot resist, and the frigate has a battery the calibre of which is insufficient to injure the ship-of-the-line. Therefore a frigate is not in condition to sustain the slightest struggle with a ship-of-the-line, because the fire of the frigate is only dangerous to the crew and the rigging, while the fire of the ship-of-the-line is destructive besides to the vessel itself, and may in a moment engulf it in the bottom of the sea.

But when the day shall come in which a small vessel, either with steam or sails, and with a small force, shall be provided with one or two guns, a single ball of which would suffice to destroy the largest vessels,—then ten small craft, each armed with two heavy guns, must quickly put an end to any ship which they surround. Ships which cost more than fifteen hundred thousand francs (\$300,000) offer, in such a case, no guarantee of permanence and good effects. The Paixhan artillery is then the destruction of the navy as at present constituted.*

During the period of the restoration, Lieutenant-Colonel Paixhans, an officer of great distinction, conceived the idea of proposing this artillery. Louis XVIII. appointed, to examine it, a commission of generals and naval officers of the highest rank, of which he made me the president.

* These principles are recognized and carried out in our gun-boat flotilla.

Experiments were, however, necessary to determine the range, the greatest accuracy of aim, and the means of easily manœuvring this piece. The experiments made at Brest succeeded perfectly, and surpassed the expectations of the author. Hence we should adopt, in artillery, the changes which produce immense modifications in naval warfare by rendering large ships unnecessary; in the defence of coasts, thus rendered easier and surer; in the defence of fortified places, which may thus be, it seems, much prolonged. But the adoption of this new arm should not cause us to dispense with the use of hollow shot, fired from thirty-six and twenty-four pounder guns; since the effects of these, although less powerful, are always formidable to the enemy, and favorable to defence.

CHAPTER III.

FORTIFICATIONS.

It would not comport with the spirit of the present work to treat in detail of fortifications, and it would probably be beyond my powers. I shall consider then simply the needs of war, and the aim which is proposed in erecting fortifications, leaving aside all that concerns the engineer's art.

In earlier times, strongholds formed themselves, so to speak. In periods of anarchy, of disorder and internal wars, a picture of which is offered by the middle ages, numerous populations, condensed and rich, desired to place themselves in a condition of safety. They were fortified by surrounding them with a rampart. They were armed. Means of attack being yet in their infancy, they were thus sheltered from all offensive attempts.

But the invention of artillery, and the perfection which that art has attained, soon changed such a condition of things. For the old strongholds, valueless against regular means of attack, it has been necessary to substitute fortified places, constructed carefully and at the expense of the state. And as they could not all be fortified, governments have interposed to make choice of the towns which, by their importance, and particularly by their posi-

tion, demanded most care and protection. The question has then been considered no longer in respect to the special interest of towns, but particularly to the defence of the country against a foreign enemy. Often, however, the choice seems to have been made at random, and without sufficient motives for the preference.

All great questions ought to be resolved upon principle. The first thing is to recognize the aim and to point it out. Then the means of attaining it will present themselves to the mind: otherwise we are moving blindly.

Here, the resolutions arrived at have been modified by private interests and personal influence; and, it may be added, by the system of war established in the epoch of Louis XIV., which rested upon many errors.

Certainly no one has a greater respect for Vauban* than myself; but he was more of an engineer than a general; and, constructing many fortifications, he gave himself up complaisantly to works in accordance with his own taste.

He must therefore be lavish of fortified towns. One thing, however, astonishes me in a genius of this nature: it is that, on an open frontier like that of Flanders, he

* Sebastian le Prestre, Seigneur de Vauban, Marshal of France, born 1633; the greatest military engineer of his age and country. He was the perfecter of the bastioned front; and is said to have fortified three hundred old citadels, erected thirty-three new ones, to have had the management of fifty-three sieges, and been present at one hundred and forty-three engagements. He left various important works on Fortifications.

had conceived the idea of creating a material barrier of great value, by means of a system of fortified places arranged like the squares of a chess-board, (*en échiquier.*)

Nothing could be better than such a system for a small country like Holland, the defence of which is in great measure based upon natural circumstances, turned to profit by art; short distances, and fortresses which control vast inundations, forming great obstacles, add to the means of an army, and facilitate its manœuvres.

But to imitate this system upon an open frontier was an error which a genius of the order of Vauban's should not commit. If he was not forced to bend to the exigencies of a superior command, he yielded in his character as engineer, to the attraction and the mania of constructions.

The changes which have taken place in the manner of making war, and especially in the strength of armies placed in the field, have demonstrated the vice of such a system of defence; and the idea of reproducing such works would not enter now into any military head.

The received principles establish two kinds of fortified places;—depot fortresses and forts of manœuvre.

The first are large, very strong, and few. One on a frontier is sufficient.

They should contain *materiel* sufficient for the needs of a large army which assembles there, in artillery equipage, in spare fire-arms, and in munitions of every kind. They should have numerous work-shops, an arsenal of construction, and, at all times, the *materiel* of a great hospital,

and subsistence stores. In a word, the regiments sent to this place must be enabled to leave it organized and armed, and ready at once to take the field and fight.

Later, the reinforcements, and recruits to fill vacancies, of which the army is in need, are organized in such places; and if the commencement of the war have been unfortunate, or if the army, inferior to that of the enemy, should be reduced from the first to the defensive, its strength would be doubled by falling back upon such a place, situated, by preference, upon a navigable river, to facilitate the arrival of stores of every kind. A depot fortress also favors the manœuvres of an army which is operating in its vicinity, and gives, at the same time, great strength to its base of operations.

We have in France three places of this kind, wonderfully situated,—Strasburg, Metz, and Lille; for the frontiers of Germany, Ardennes and Flanders.

In the days of our grandeur, we had in Italy, according to the space, three places in echelons which assured us the possession of that country,—Alexandria, Mantua, and Venice. Had our prosperity lasted, it is probable that another stronghold of great importance would have been constructed on the Save. In newly-conquered countries, such places are not only depots for the defence of the frontier, they are also places of sway over the surrounding territory.

After the depot fortresses, come the forts of manœuvre. These are useful in facilitating the movements of armies, and in thwarting or hindering those of the enemy.

They should be exclusively situated, either on rivers, of which they occupy both banks, or upon mountains the valleys of which they enclose.

A chain of mountains presents great obstacles to the movements of an army. The roads which cross it can alone give passage to a considerable *materiel*. It is therefore useful to close the points of issue by a fortress, in such a manner as to hinder an attacking enemy from profiting by them, and reserving to ourselves the power to use them.

A river forms the line of defence for an army; the enemy makes his arrangements to cross it; he must create the means of passage, for he does not possess permanent bridges. The army placed upon the defensive can, on the contrary, manœuvre with security upon both banks, and bring all its forces against one part of those of the enemy, when they are divided. If it succeeds in beating the troops which have remained in rear, and which have not yet crossed the river, it delivers those who have crossed to the fatal chances which are presented by an isolated situation and broken communications. In general, the most efficacious method, for an energetic defence, consists in offensive movements restrained, well calculated, executed rapidly and fitly.

I will make this the limit of the general ideas which should preside in the defence of a frontier. As to the details of construction, I will only say that, considering the movements of artillery, and the facilities of transportation, there is an object which cannot be too strongly

recommended to the consideration of engineers, viz.,—to prepare shelters sufficient and perfectly secure for stores of every kind, and for a considerable part of the *personnel* of the garrison; otherwise the defence is not possible.

Strongholds should, besides, occupy great spaces, by means of detached works systematically placed, and so strong that each one will be able to defend itself. The general defence will thus be rendered easier, the attack will be more embarrassed, and the resistance much longer. This kind of fortification had received a fine application at Alessandria in Piedmont; and, if political events had permitted it to be used, that place would have rendered great service. But afterwards, its considerable extent requiring a large garrison, and the Piedmontese army being of moderate numerical strength, the King of Sardinia could not, with propriety, preserve it. It has therefore been destroyed, and is reduced, at the present time, to the citadel alone.

I have explained, in another place, the design of strongholds and the conditions which should determine their construction, and the choice of their location. I will now speak of those fortifications the object of which is to cover an inferior army against a superior one, and to give to it power to resist, in spite of the disproportion of force: in a word, **entrenched camps**, designed to establish a kind of equilibrium between unequal forces.

Entrenched camps are of two kinds. The first are composed of a continuous line, which creates material

obstacles along the entire development of the position occupied by an army; the others consist of a determined number of points fortified with care, rendered, if possible, strong enough to be under no apprehension from a sudden attack, (*coup-de-main.*) Being able to resist a powerful attack, they serve also as supports for troops, protect their flanks, cover a part of their front, render them impregnable, without in any way restricting the liberty of their movements.

The first kind have scarcely ever accomplished good results. Attacked seriously, they have almost always been forced. This result may be attributed to two causes.

First, the troops, obliged to guard the entire development, are too much divided; a single point gained by the enemy often suffices to cause the evacuation of all the others. Second, the entrenched army always regards itself as inferior, and this opinion robs it of one-half its strength. If a point is forced, it gives up the thought of resistance, although this is the very moment when it is most sure of conquering; for it has necessarily superior forces to the enemy, who has as yet been only able to penetrate with the head of a column, and whose troops, following the first, can only arrive slowly, and by passing through defiles. And so it is, that while cheap and easy success belongs to the entrenched force, it thinks only of retreat.

The examples in illustration of this are numerous. It would be easy for me to cite many, but I will content my-

self with mentioning three celebrated ones, the last of which took place under my own eyes.

The first is the storming of the lines of Turin, defended by an army of 80,000 men, attacked by Prince Eugene of Savoy* with 40,000 Austrians.

The second was offered at Denain, where Marshal Villars,† with a disheartened and inferior army, beat Prince Eugene.

The third is the taking of the lines of Mayence, defended by a French army of 30,000 men, and composed of works of rare perfection, the most considerable of their kind which have been built in modern times. Constructed under the direction of General Chasseloup-Laubat, one of the best engineers France has ever had, these works seemed impregnable. Nevertheless, on the 8th of October, 1795, two detachments were sufficient to give rise to a disorder which nothing could repair; the one of four hundred men, crossing the Rhine in rear and above, the other which coming up through a narrow space, left between the river and the lines, at the moment when numerous troops were arranged for an attack in front.

* The fifth son of Eugene Maurice, Duke of Savoy-Carignan, born at Paris, 1668. Entered the Austrian service, 1688. Served as a volunteer against the Turks; created Lieutenant Field Marshal, 1687. Defeated the Turks at Zenta, September 11, 1697. Surprised and defeated Villeroy near Cremona. Aided Marlborough in the victory of Hochstädt, (Blenheim,) August 13, 1704. Took Belgrade, 1717.

† Louis Hector de Villars, born at Lyons, 1658. Served in the army of Louis XIV. Created Maréchal de Camp, 1690. Defeated the Austrians at Denain, 1712, and forced Prince Eugene to raise the siege of Landrécy.

The only reasonable use which can be made of **parallel lines**, is to employ them against very large but poor armies,—against Eastern troops. Their utility in such cases has always been demonstrated and acknowledged; the success obtained by Prince Eugene of Savoy before Belgrade, is an additional proof of it. Placed between the lines of circumvallation erected against the garrison of the fortress and the lines of countervallation facing the army of the Grand Vizier, he was able to continue the siege, hold the army in check, capture the place, and come out of the struggle victorious; but, against European armies, other principles must be followed.

When a soldier is authorized to place his entire safety in a material obstacle which is before him, that obstacle being overcome, he thinks no longer of defence, and this fatal impression is often communicated to persons of high grade. A soldier should, on the contrary, be convinced—and he cannot too often be reminded of it—that the guarantee of victory lies chiefly in his courage, and that he ought to scorn the enemy. But if, instead of obstacles which paralyze his movements, he has only supports which cover and protect his flanks, he will consider himself invincible, and this opinion will soon be shared by his enemy; then if he resists an attack, free to move in any direction, he will have the power to profit by a victory, and to develop its consequences.

An army in presence of another army stronger than itself, and in definitive circumstances, will do well to entrench itself. Resting upon a fort, a river, or mount-

ains, and environed by a greater or less number of defensive points rendered as strong as possible, it will succeed in supplying the want of numbers, and in establishing a sort of equilibrium.

The subject leads me naturally to the question of permanent entrenched camps; newly established, composed of revetted works, embracing a large space, situated on strategic points, and traversed by a great river. Nothing, in my judgment, is of more value, or can be of greater service. Many establishments of this kind, although constructed upon very different scales, and on conditions by no means the same, are now in process of erection or have been erected within a recent period. I will mention two principal ones which have attracted the most attention—that of Lintz, in Upper Austria, and the fortifications of Paris.

The entrenched camp of Lintz is composed of forty-two towers, carefully constructed; they occupy a circular space of more than six leagues; each one of these towers is casemated,* covered, on the side toward the open country, by the relief of a *glacis*,† and it has an entirely sweeping fire. The model tower had a deep ditch, with a revetted counter-scarp, and a counter-scarp gallery for reverse fire; and it was very wrong, I think, that these means of security were suppressed in the system. The

* A casemate is a bomb-proof chamber or vault in a fort, through an opening in which—usually in the scarp wall—cannon are fired.

† The outer slope of the ground, beyond the ditch, towards the open country.

armament of each tower is composed of a dozen pieces of large calibre. The towers are placed in sight of each other, and near enough to support each other. They occupy, in a portion of their development, a succession of heights, connected at some distance with rugged and difficult mountains, and they abut and support themselves upon the right bank of the Danube, some distance above the town. On the left bank, a greater height, buttressed upon the upper Danube, (Pöstlingberg,) is occupied by a proper and sufficiently strong work; from which extends another line of towers, embracing a large space, and coming in the same manner to rest upon the Danube, below the town.

I will not here discuss the strength of isolated towers; I think them but little capable of resistance, when abandoned to themselves. But, covering an army, which is enclosed in the space embraced by them, they seem to me to be impregnable. Never could the enemy undertake to besiege them, sustained as they are by the army, and never would an army placed under their protection, have anything to fear.

The fundamental principle of entrenched camps of this kind is, that they cannot be blockaded, and that they are placed at the meeting point of numerous communications. With this in view the camp of Lintz is in proper position, its strategic position is well chosen. Two roads, one on each bank of the Danube, go down the river at greater or less distance from its borders. Many roads lead into Bohemia; others are directed toward Salzburg, the Tyrol,

Styria and Carinthia. A camp as large as that of Lintz, with the obstacles which the country presents, cannot be surrounded by the enemy; and the army which is there enclosed can never lose all its communications, unless we suppose that the forces in its front are at least triple its own. It will then be always able to receive reinforcements, and be reorganized, until the moment when it may think proper to assume the offensive: the enemy will thus be forced to remain in observation; for never would he dare to risk himself in the narrow valley of the Danube, and to march upon Vienna, leaving the Austrian army in that offensive and menacing position.

Indeed such a resolution would be foolish in the extreme; and if, in 1809, the camp of Lintz had existed, Napoleon would not have gone to Vienna, or would have entered it much later than he did. In war, and especially for great monarchies, time is everything, since it is only necessary to give the natural resources of a country the means of developing. The entrenched camp of Lintz was then a good and great military conception.

There are in every country localities which would aid analogous establishments, and which would, upon occasion, be of great utility.

The entrenched camp of Verona was constructed in the same spirit; and, although there may be very different conditions, it can and must play an important part, in the hands of a general who will be able to make use of it in his manœuvres.

I come now to the defensive works erected at Paris,

which have been, and still are, objects of such great and solemn debates. The construction of the forts, the system of which seems to me perfectly conceived, is a greater assurance of the independence of France against the attacks of entire Europe, than the acquisition of many provinces, which would have in that proportion removed the frontier to a greater distance.

No one will deny the immense influence exerted by Paris upon the destinies of the kingdom. A head out of proportion to the body, but a living centre, where are assembled faculties and intelligence, where an irresistible moral power is developed, where immense treasures are accumulated, and where is found in reunion all that the country has most distinguished, Paris has accomplished wonders for the power, the glory and the brilliancy of France. But that city caused it to purchase this advantage at a dear rate, by the weight with which it crushed the country when it fell. Interests which touch the whole kingdom, and compromise its very existence, cannot be abandoned to the hazard of two or three battles: either the frontiers must be removed, or the dangers which the enemy's approach causes it to risk should be diminished; and there was no other means but to prepare an impregnable refuge for the French armies, unfortunate and beaten, by reuniting them under her walls.

Whatever might be the consequences of the most disastrous campaign, 80,000 or 100,000 men of the fragments will always constitute the remains of an army; and resting against forts regularly constructed, these 80,000 men

will be unconquerable. Now, with the resources which Paris contains in *personnel* of every kind, in *materiel* of every sort, and with the aids of the neighboring departments, the skeletons would soon be filled up, the losses repaired; and in less than one month an army of 300,000 men, well provided, and renewed as to its *morale*, would be ready to march against the enemy. What force then would not the enemy require to resist? If he divides his forces he will be feeble in all parts and easily destroyed; if he holds together to resist and to fight, how can he support himself? And what would be his fate after the smallest check?

If then the enemy should advance upon Paris, there would be nothing better for him to do than to leave it again, before the French army, reorganized, should be able to go and find him there; he would be obliged to hasten to establish the war in the provinces, and within reach of his resources. In that case the war is carried back to the frontiers, and everything returning into its natural condition, a catastrophe is no longer to be feared.

I regard, then, as a most useful event to the safety and to the defence of France, the construction of detached forts, the development of which is such that the enemy cannot present himself in force upon many points at once. But it was not necessary to fortify Paris by a continuous fortification; for in my judgment and in that of men of education and experience, this city is not in condition to sustain a siege; it was sufficient to adopt such a system

of defence that it can never be besieged; and, to this end, the only end which should have been considered, the forts were sufficient; the continuous line is superfluous; and whatever may happen it can never have a useful application.

CHAPTER IV.

ADMINISTRATION.

MEN brought together in large numbers have wants; the talent to satisfy these with order, economy, and intelligence, forms the **science of administration**.

The basis of a good administration is in the care taken to acknowledge the reality of consumption, (*légitimité des consommations*.) Where the reviews are exact, where the effective force and those present under arms are determined in a precise manner and frequently, there are elements of order: for great abuses are found less in the prices of things consumed, than in the consumptions which have never taken place, but are only conjectured.

In the time of the Directory, the French military administration was in great confusion; and the First Consul, upon his accession to power, made haste to create a new corps, charged with revisions, for the establishment of order.

He determined to give it great consideration, which was justified by great zeal. At the end of six months, more than 150,000 men, who were not in existence, but for the greater number of whom rations, pay and clothing were drawn, were stricken from the rolls.

The systems of administration are different according

to countries: all are susceptible of good results, whenever the effective force, and those present under arms are exactly determined. I will only observe that there are, in my opinion at least, great advantages in giving to various corps the faculty of administering for themselves as far as possible; for as the excellence of troops is always connected with good administration, a great responsibility should be imposed on the commanders of bodies of troops, and they should also be invested with great powers; their operations should be scrutinized, but the direction of them should be left to their discretion. The sole responsibility of judgment concerning the soldiers is itself a great guarantee that they will be zealous. The colonels who are found to prevaricate should be punished in an exemplary manner; but, on the other hand, the glory of the successes they obtain should be conceded to them.

It has been forbidden in France to form, in the various corps, economical clubs, (*masses d'économie*,) and a great error has thus been committed. A community of living is always of advantage, and a skilful and intelligent commander, without depriving the soldiers of the enjoyment of any of their rights, can and ought to make them thus economize. If forbidden, they are none the less formed, and not being avowed, they are often put to a mysterious and culpable use. When, on the contrary, they are not only authorized, but also directed, and left to the disposition of the commander, to be used for the benefit of the regiment, in accidental cases and those beyond the prevision of the regulations, there will be great encour-

agement, and the colonels will be honored by the success of an industry, the honorable fruits of which they will reap.

Two very important branches of administration are defective in almost all the armies of Europe: these are **hospitals and provisions.*** An enlightened government ought to seek to establish both upon a new basis; important and direct benefits to the art of war, and for the welfare and preservation of the soldiers, would result from it. I will begin with provisions.

SECTION FIRST.

PROVISIONS.

In treating of the **victualling** of troops, I shall only speak of the furnishing of bread; it, alone, presents difficulties, the provision of cattle being always within reach of the consumers.

The difficulty of distributing bread regularly to the troops, is one of the most embarrassing things in war. It is inexplicable that so many distinguished generals, who, from this cause, have been thwarted and fettered in the execution of their projects, should not have arrived at the solution of so important a problem.

The Romans had solved it; but, in general, their wars

* Called in our service *subsistence stores*: the officers charged with providing them are called *commissaries of subsistence*.

did not require as rapid movements as those of modern wars.

There is, I believe, a perfectly satisfactory manner of conquering this difficulty, and the change which I propose would have a powerful influence upon the art of war.

Regularly to receive distributions of bread through the labors of the administration, the army should be either stationary or in retreat, always remaining at the same distance from its magazines, or approaching them.

If in marching forward, it departs from them in a constantly increasing manner, the operation would be impossible for any commissary, however skilful he might be; for convoys could not move more rapidly than the army, and they would follow it always at the same distance as at the moment of departure; at each new expedition of a convoy, the distance increasing, the difficulty becomes greater.

In a war of invasion, the troops can only live upon the resources of the country through which they range. But the time necessary to make bread in inhabited places, the ordinary insufficiency of mills and ovens, and their distance, render local resources very incomplete, and the penury which results from these things leads to great sufferings and great disorder. Now, the maintenance of order, of every kind, and in every manner, is the safety of armies.

The only efficacious means of insuring the regular subsistence of the soldier, is to put upon himself the duty of

providing, according to a designated mode. I have made the experiment, and the result was entirely favorable.

Men do not make war in a desert, or if such an exceptional circumstance should happen, they make their dispositions accordingly. War is ordinarily made in inhabited countries; and where there are people, there is grain to feed them. It is then in the means of using the grain, with which the barns are filled, that the solution of the question is found.

The great difficulty is to reduce the grain to flour, as I will explain further on. There must be mills to grind the corn; men could live, at need, on flour alone, without turning it into bread; but they would die of hunger on heaps of corn.

When manual labor is scarce and dear, there is advantage in using powerful machines in manufactures, and in centralizing the labor; but when manual labor is abundant and costs nothing, it would be better to follow an entirely opposite system. By thrusting the labor from the centre to the circumference, it is rendered easier; and by putting it into the hands of those who will profit by it, their zeal and punctuality are assured. That being settled, it is evident that the labor of soldiers can be arranged, without disadvantage, and it is to their benefit to receive, as an indemnity, the current market price of the labor with which they are tasked.

Why is it that, in the field, soldiers never lack soup, when they have meat, bread and camp-kettles? It is because they make it themselves. If a commissary had conceived

the idea of undertaking it for a whole division, on any pretext whatever, or even a colonel for his regiment, never, while marching, would soldiers have it to eat.

Let us apply this example of soup to bread making, and the soldier would never want for it. I propose to give the army portable mills: I tried this measure in one campaign in Spain, and it succeeded completely. The army of Portugal, in 1812, subsisted thus, during six months; the only disadvantage encountered was that the grinding stones were rapidly worn out; that was remedied by means of a better hardening process, and very durable ones were made.

Napoleon, informed of these results, was struck, in the midst of the miseries of the Russian campaign, with the advantages which might be derived from their use; and he ordered a great number of these mills to be made for the grand army. Five hundred were sent to him; they arrived at Smolensk, at the time the army was returning from Moscow. But then there was no longer manual labor to work them, nor were there soldiers to use them.

I will state what were and what ought to be the condition of these mills:—

1. Light enough to be carried by one soldier, who leaves his ranks for that purpose, on account of its importance, if the regular means of transportation chance to be wanting.

2. Capable of being used by a single man.

3. Producing fine flour, and sufficient, with four hours' labor, for the wants of a company.

The mills of the army of Portugal produced thirty pounds of fine flour in an hour. It has been objected to this system, that the regulations having prescribed the extraction of the bran, this operation complicates the process. I answer that carefully-made experiments have proved the uselessness of extracting the bran, with grain of a good quality.

With even tolerable grain, if it be pure and unmixed, the bread is always good. When the commissariat provides bad bread, the soldier must necessarily receive it and eat it, under pain of dying of hunger, because the time of consumption is immediate; but when the grain which is issued to him is full of dust, or of any other mixture, it may be cleaned before using it, and thus the soldier will always eat good bread. In this respect, his condition will be ameliorated; it would be still more so by the extra pay for his labor, which he would receive either in money or in an increase of ration.

But this is what I judge to be the aim of the administration;—habitual simplification, in time of war,—facility of service. A general-in-chief makes more mental effort, in the present day, to assure the subsistence of his troops than for all other things, and his combinations are constantly thwarted and destroyed, for want of issues of bread, made in time.

Thus has been resolved, not only the question of indispensable food given to the troops, but also that relative to bread, properly so called. Means have been found to make, by a simple excavation, in all kinds of soil, and in

four hours, ovens which two hours afterwards are ready to bake bread. In every bivouac, flour is made in sufficient quantity for daily consumption; and at every rest or stop in the movement, furnaces are made in the soil of a peasant's homestead, and bread baked in advance. From that moment the supply of an army takes place of itself; the administration is not more occupied with these details, than each man is with the assurance of the circulation of his blood: it is the consequence of a principle which is constantly in action.

In time of peace, the government should have magazines of grain to issue to the troops. In a defensive war, it should be the same. In a war of invasion each regiment would receive daily from the administration of the country through which it was passing, or would take from the barns of the inhabitants, the necessary quantity of grain. But the habit must be followed and contracted during peace; for, on principle, the usages of peace ought to assimilate as far as possible to those of war; and this truth is particularly incontestible when it concerns the introduction of a great change.

SECTION SECOND.

HOSPITALS.

There is nothing sadder than the spectacle often presented in an army by **military hospitals**. Attentions,

almost always incomplete, are given to a class of men, who nevertheless, by many titles, have the right to universal solicitude. A life of devotion composes their existence; sufferings, fatigues, dangers, are their only prospect. The noblest sentiments animate their hearts, and these generous men only ask of their commanders, that, in order to secure their love, they should be just in the exercise of their authority. Such is the inherent spirit of a soldier; and it especially belongs to the French soldier, who is no stranger to any of the sentiments which honor humanity. Doubtless there are vices and evil passions in armies, as in all associations of men; but we there find also the model of the highest virtues. The preservation of sick and wounded soldiers is then a duty of conscience and of humanity. It is also of great importance for the government as well as for the general; for the greatest number of soldiers is an element of success, and their replacement by recruits, costly as it is, is far from supplying the place of those which are lost. Moreover, what confidence, what energy is inspired, on the battle-field, in a good soldier, by the certainty that in case of wounds, the most efficient succors will be lavished upon him!

Perhaps, to this end, it would be necessary to change the character of the administration of hospitals; to seek a mode of recompense more noble than that of pecuniary interest, to develop worthier and more elevated considerations, the better to sustain courage and devotion.

If the functions of those who administer to the care of the sick and wounded were elevated, ennobled and re-

warded by public opinion, and by the pleasures which the exercise of charity, and the sentiment of piety afford, there would most certainly result from this a great benefit to the suffering.

The means of achieving this result would be to leave to a religious body, who were not strangers to the subordinate functions of surgery and medicine, the care of military hospitals; not the administration properly so called, and the handling of the funds, but the monopoly of cares and of direction.

A body of brothers-hospitallers, engaged for life, or for a determined time, having honored commanders, might be charged with the care of the wards, and with service at the bedsides of the sick. Paid assistants would be placed under their orders for the more menial and disagreeable duties; but without any kind of care, in an urgent case being thought beneath the commanders themselves. The spirit of charity would support them in their labors. A detachment of these respectable brothers, after having received their destination, would never quit the individuals confided to their care. Their presence would be hope and consolation to the sick; and their holy ministry, exercised to the profit of all, friends and enemies, would become their safeguard among all the armies of Europe, when the fortune of arms should cause them to fall into their hands.

Public consideration and the joys of conscience would be their special reward. A hierarchy wisely constructed would establish a blind obedience in a corps devoted

to the practice of the most touching virtues. The general of an army should receive at times, and give the place of honor to, the superior of these brothers-hospitalers; he would honor thus all the subalterns, and would pay them with that precious coin, the value of which is increased tenfold by the measure with which it is employed.

Thus the service of hospitals would be performed by three bodies:—

1. The doctors of the medical art, physicians and surgeons;

2. The administration which creates the *materiel*, disposes of the funds, and provides the commissariat;

3. The hospital-brothers, charged with administering the cares, and with directing their entire application to the welfare of the sick.

This latter corps, constituting in some sort the board of living and energetic control of everything ill-judged which the administration properly so called might do, would offer a guarantee, at all times, for regular system.

The Knights of Malta* had their origin in the attentions given to pilgrims who were going to Jerusalem, and charity was their first law. Anarchy and disorder in the places where they were established, forced them to arm for their own defence; and, while remaining hospitallers, they became soldiers.

* The Knights Hospitallers of St. John: after the crusades, resident at Rhodes, and when driven thence by the Ottomans, stationed at Malta, which was presented to them by Charles V.

Courage and the profession of arms have always had, and will never cease to have, an *éclat* which naturally pleases the multitude; and the character of soldiers having inspired them with a love of war, the hospitallers changed their nature. Their creation had been the expression of the wants of a certain society; and what I would restore would greatly ameliorate the condition of that mass of men, worthy of so great interest, which forms, in Europe, an energetic and truly patriotic part of every nation.

It would not be difficult to draw up the conditions for the administration and service of hospitals; but these naturally spring from the general plan which I have adopted.

For a long time past, and under the Empire, in view of the disorders of which I have sometimes been a witness, this idea has constantly occupied my mind. Under the Restoration, it was not practicable, because of the suppositions to which it gave birth; but the moment has perhaps arrived for its execution with profit and success. How great would be the relief experienced thereby, by the army of Africa, (Algerie.)

I do not disguise to myself the objections which may be urged to this establishment, nor the difficulties of maintaining harmony between rival corps, working to the same end; but there are already two, which are often far from being understood, and a third, without complicating the matter much more, would bring useful information for the enlightenment of authority.

I know besides that a kind of ridicule may be thrown

upon this institution; but I willingly brave it, giving myself up to the thought that it would contribute to the amelioration of the lot of soldiers; a powerful interest in my judgment, both for the service and for humanity.

In later years, the service of hospitals has, however, been ameliorated, by a military organization of the attendants. A system of grades, established as among troops, gives a prospect to those who serve well, and creates a means of order, of oversight and of discipline; a kind of point of honor springs up, and authority is more easily exercised. Good results should ensue.

In general, military organization insures at all times the regular action of power; it thus constitutes essentially a great means of order; it would be successfully employed whenever it was desirable to act upon associations of men destined to work together for the same end; and the more the first elements are impressed with it, the more it will tend to profit and advantage.

One word more about hospitals.

The wretched and false calculations of economy upon what we have agreed to call, in the language of accounts, the hospital daily report, have been the cause of diminishing too much the number of these establishments; and the desire of putting upon other persons duties which concern ourselves, has too frequently multiplied their abandonment. Nothing is more fatal than these two systems, when they are not prompted by imperious circumstances, such as the vicinity of the enemy, the absolute want of means, etc. In ordinary cases, hospitals cannot be placed too

closely within reach of the troops, nor can the sick be too much divided as to place. Generally, diseases of a simple nature are cured in a few days, when they are treated at once. They are aggravated by long transportation; and long return journeys, after the disease is over, exhaust men still feeble, and produce relapses which another journey renders fatal. Thus, by multiplying hospitals, and placing them within reach of the troops, their cure is rendered easier, the diseases are hindered from becoming aggravated, and the sick from being weakened; and we prevent the obstacles which bring in their train those contagious diseases, such fatal sources of the greatest ravages.

By this system, more money would seem to be expended, but the result would be a much greater economy.

This is the system which I have constantly followed, and by it the troops under my orders have found themselves well cared for.

CHAPTER V.

MILITARY JUSTICE, AND THE COMPOSITION OF COURTS-MARTIAL.

THE social state cannot subsist, if the conditions of its existence are not fulfilled. It is the same with an army, which presents the example of a particular society, subjected to special rules and a special code of morals. To discover the principle which may solve our question, I look first at the characteristics of military justice, and I find it to be the complement of the means of discipline. To whose hands should its execution be confided? To the hands of those who are charged with the maintenance of discipline, who feel every day its necessity, who perform its duties, and are the most interested in it. It is then to the officers in active service that this care should be exclusively committed.

Nevertheless, it has not always been so. During the Revolution, military judges were appointed, who were civic officers accompanying the army. The error which had thus been made was soon recognized: the consequences were fatal; and councils of war were created, such as they are at present.

In 1829, an effort was made to improve the matter,

and a new law for military justice was presented to the chamber of peers.

A commission composed of men of eminent merit, but unacquainted with troops, proposed to substitute for the temporary councils of war, permanent war-tribunals, presided over by general officers. This new method, by establishing a military magistracy distinct from the army proper, would have had all the disadvantages of the system adopted temporarily under the Republic, and would besides have altered, in the eyes of the troops, the character of generals, essentially fighting men, who should, by their presence, keep alive the ideas of glory and reward, and not thoughts of crime and punishment.

Military justice is not established, in an absolute manner, upon *moral* principles: its foundation is *necessity*.

Doubtless, in the judgment of all sensible men—as far as morality and the interest which belongs to personal right are concerned—there is a great difference between the thief, and the soldier who disobeys his commander and insults him in a moment of passion. Nevertheless, the punishment of the soldier will be the graver. To avenge society, it will be sufficient that the one should go to the galleys, while the army would be lost if the other were not punished with death: for, from that moment, all bonds are broken, and the military edifice, which is only based on respect and submission, would crumble without this support.

There is then an immense difference between civil justice and military justice. The latter seems barbarous,

but it is indispensable; and its execution can only be insured by the very persons who, by the conditions of their existence, are interested in it.

If the battalion forms the unit for battle, the regiment forms the social military unit,—the family and the tribe. The colonel, the chief of this society, is invested with a kind of magistracy which must carefully guard its preservation.

It is for him to punish; it is for him to assure to each one impartial and speedy justice, to maintain daily order, and the execution of the laws, upon which that order rests. Thus when regular armies have been formed, each regiment has had its tribunal under the high oversight of its colonel; and even at that epoch it was not only a necessity, but a right; for each colonel being the administrator of his regiment, should have legal and extended powers as the guarantee of the obedience of his subordinates.

Regimental tribunals still exist in many of the great armies of Europe. Placed within reach of the persons to be tried, their action can always make itself felt without delay. This consideration is of such capital importance, that perhaps there is reason to prefer that system to another adopted in France and Russia,—that of division tribunals only.

We understand the motive which has influenced the legislator; he wished to shelter the accused from the personal passions of the commanders, by causing them to be tried before a tribunal composed in great part of officers

not belonging to their corps. On the other hand, these officers being in active service and employed with troops, it seems certain that their judgment, delivered without prejudice, will have that severe character which the good of the service demands; for the colonel who presides would do for the interest of any other regiment just what will be done at some later time for his own regiment by another colonel. The interest of the army will always be considered.

There has been established, in each council of war, an organization of officers of every grade. It is a recognition of the sentiment of duty which is remarked equally in all the parts of a hierarchy, and a guarantee for the accused, who thus have one or many of their peers—in rank—among their judges. Such an arrangement is without danger; for indulgence, if that be feared, is more probable in elevated than in inferior grades.

I conclude then that, on all grounds, military tribunals ought to be exclusively composed of individuals in active service, and belonging to the very corps placed under their jurisdiction.

A final arrangement would perhaps be desirable in military justice. It exists in Austria, and the effects seem to me salutary. The right of pardon and the commutation of punishment are not reserved to the sovereign; they belong to the colonel proprietary of the regiment;*

* The "proprietor" of a regiment confers his name upon it, and nominates the officers up to the grade of captain, inclusive.—*McClellan's "Armies of Europe."* Topic, "*The Austrian Infantry.*"

who, in practice, delegates their exercise to the field officer commanding. There are so many circumstances which may operate in favor of a soldier guilty of breach of discipline, (it is almost always for such acts that pardon is granted,) the commanders who are upon the spot are so fully able to appreciate the opportuneness of an act of clemency, that it would be, in my judgment, very useful to confer this prerogative, not to the commander of the corps, but to the commanding general of the division, or of the *corps d'armée*.

In the present condition of things, a brave soldier, whom every one would willingly save, perishes, a victim to the rigor of the law; or, in the desire for his preservation, justice is violated,—an equally painful alternative.

PART III.

DIFFERENT OPERATIONS OF WAR.

CHAPTER I.

THE USE OF THE DIFFERENT ARMS.*

THE troops of the different arms should be separately organized, that they may receive the uniform instruction which is appropriate, and acquire a suitable spirit.

This principle has sometimes been deviated from, by forming *legions*, but they have not worked well. The officers who command these corps, being best acquainted with the arm in which they originally served, always give it the preference, and treat it according to their predilection. In the artillery, it is absolutely impossible to provide for the needs of instruction; for it would re-

* The use of the word arms is twofold; it refers to weapons,—the musket, cannon, sabre, lance, etc.; and also, as in this connection, to the great essential division of troops into *infantry, cavalry and artillery*. These are called *the three arms*.

quire us to multiply infinitely the necessary establishments, such as the polygon,* schools, and batteries of different kinds. The artillery ought therefore to be collected together in a single garrison, if possible, that they may all receive the same instruction. The government might then devote more money to this object, since a greater number of individuals would participate in it. I proposed this when I was commander of the French artillery; but considerations of administration and economy, based upon local interests, prevented the adoption of the change.

But if the arms should be separated in time of peace, the better to develop their special instruction, they must be combined in time of war.

It is by mingling them intelligently and skilfully, that the best results are obtained; they sustain each other reciprocally, and concert their efforts appropriately. By leaving together the same corps, associated during many campaigns under the same general, an *esprit de corps* is created, and, in consequence, a useful homogeneousness. The troops have thus all the value of which they are susceptible. The legion, among the Romans, is the first example of this combination, which certainly contributed powerfully to their triumphs. "A divinity," says Vegetius, "inspired them with the conception."

* The "*polygone*" is a place enclosed by works resembling those of a fortification, set apart for the instruction of the artillery, in their various exercises; "*Le petit polygone*" is the place for carrying on gun-drill in winter, generally in the bastion nearest to the artillery barracks.—*Burns's Naval and Military Dictionary*, voce "POLY-GONE."

In the middle ages, in the period which followed them, and even down to our time, the greatest generals had no idea of imitating them; even Frederick did not think of doing so. The essay was made in the French army, at the end of the seven years' war, under Marshal Broglio,* and to this belongs the glory of putting that profound conception into practical shape. But the usage was not established until the commencement of the wars of the Republic, and then it was that the art of war underwent one of the greatest revolutions of our day.

The infantry, organized formerly in brigades, was under the orders, when it was formed, of two or three generals, who commanded the centre and the wings respectively. The cavalry was in the same manner divided and placed upon the wings, and the appointments to subordinate commands were given only upon the day of battle. All the generals resided ordinarily at the general headquarters, and they were charged, in routine, with the duty of leading detachments. The general of an army, wishing to confide an instant command and the charge of an expedition to a very capable general, or one who inspired him with more confidence than the rest, was thus forced to wait until the order of the roster brought the turn of that individual to march, and he must adjourn the opera-

* There were several of this name. The one here referred to is Victor Francis, born, 1718, who was not only distinguished in the seven years' war, in which he fought under D'Estrées at Hastenback, and under Soubise at Rosbach, but he was Minister of War to Louis XVI. in 1789, and commanded a division of *Émigrés* in 1792. He died in 1804.

tion, or make fictitious detachments, to employ those who preceded him. The detachments having returned, the troops were separated, and the brigades received their destination by the directions of the general staff. It is asked how, with such a system, an army of any size could be moved, could form and fight?

They employed whole days at a time, simply to put the army in line of battle. The least movement often produced confusion, and the heavy artillery, leaving the park for the battle-field, and put in battery sometimes the evening before, went into park again immediately after the action.

This barbarous and absurd system has been changed since our earlier wars; and all the armies of Europe soon adopted, from our example, the new organization, which gives mobility to the troops and renders them always ready to fight. A general has thus the means of making with facility such combinations as circumstances and his genius may inspire in him.

In an army, the constant unit, which should never vary, but the numerical strength of which may be greater or less, is the **division**. It is ordinarily composed of two brigades, each of two regiments, and sometimes of three; and it has, besides, two batteries of artillery and a corps of seven or eight hundred horse. It has a complete administration; it is an army on a small scale: it can act separately, march, subsist and fight; or it can come with ease to take the part assigned to it in line of battle.

It was thus that the French army was organized in our

first and immortal campaigns in Italy, and also some years afterwards. At a later period, Napoleon having formed *corps d'armée*, he withdrew the cavalry from the divisions, and contented himself with applying to the *corps d'armée* the principles of the legion. But in the *corps d'armée* the cavalry is too far from the divisions; it is not under the control of the infantry generals who conduct the battle; it is unable, in many circumstances, to take timely advantage of the disorders which arise in the enemy's ranks. I shall hereafter speak of *corps d'armée*, and the circumstances which have authorized and even necessitated their formation.

The division is then the army unit, the first element by which the three arms are bound together in an intimate manner; but the wants of an army are not limited thus.

Each arm, after having been accessory, must in its turn become a principal element, because there are circumstances in which a particular effect is to be produced. Thus cavalry reserves are indispensable, whether for engaging masses of cavalry, or to precipitate themselves upon ill-supported infantry corps, or to cover infantry when in disorder, or to carry batteries, etc.

This cavalry should be supported and sustained by an artillery force belonging to and associated with it, according to circumstances, in order to obtain the desired result. The cavalry is here the principal arm, and the artillery accessory. But the turn of the latter also comes during the battle; the artillery reserve, employed to produce a great effect, at a given moment and upon a designated

point, becomes suddenly the principal arm; it crushes the enemy with its fire. Then the infantry advance, which completes the disorder, and finally the cavalry, charging upon them, finish their destruction and assures the victory.

I shall not enter into those details which would establish the character of the circumstances in which the artillery is charged with the exclusive part; but I have already said enough to conclude that each arm must be, in turn, accessory and principal; and if the artillery is to act upon an isolated point, the infantry and cavalry troops, designed to protect it and assure its safety, must be subordinate to it in all their movements.

But cavalry reserves, important as they are, should not exceed a designated force upon a given point: beyond certain limits, the most skilful general cannot handle them; and, besides, it is difficult to subsist a great number of horses together.

I would limit the force to six thousand horse, the management of which is practicable; with this number success ought to attend any reasonable undertaking with cavalry upon the field of battle.

Napoleon, in his last campaigns, organized bodies of cavalry composed of three divisions numbering at least twelve thousand horse. This idea was monstrous, and without useful application on a battle-field; it was the cause of immense losses without fighting, these great corps having served no other purpose than to present an extraordinary spectacle, designed to astonish the eye.

The organization of armies should then establish divisions, and reserves of each arm. I refer to armies of moderate strength; for in great armies, there must be besides an additional echelon, as an element of order and of action. This is brought about by constituting the troops into *corps d'armée*: that is, there should be established fixed commands, intermediate between the commander-in-chief and the generals commanding divisions.

An army of 100,000 men, arranged in ten or twelve divisions, would be difficult to manage, if it were not organized in *corps d'armée*; for confusion would soon arise on account of the too great number of independent units, allowed to manœuvre freely according to the general direction given by a single commander-in-chief. The need has therefore been early felt to form new aggregations of these divisions, to simplify the arrangements of the general-in-chief; and two, three, or four divisions have, to this end, been united together.

Thus an army, composed as I have just indicated, is divided into four fractions; the general-in-chief can move these with facility; he has in hand four corps, of which three form his line of battle, and the fourth his reserve.

In all grades of the military hierarchy, it is by placing a commander in communication with a small number of immediate subordinates that the exercise of authority is facilitated.

The *corps d'armée*, being small armies, should have an organization analogous to the principles which I have established, and should be thus composed:—

1. Of three divisions, in which the three arms are combined ;
2. Of a reserve of cavalry, supported by horse artillery ;
3. Of a reserve of artillery.

The reserves, designed to move in any direction, at need, should be very easy of movement, (*mobiles*,) and for the artillery, which must often take post at great distances, light artillery should be employed.

Thus ordinary artillery, which by its new organization is very moveable, would answer for service with the divisions of infantry ; and light artillery would be exclusively employed, in serving with cavalry and for reserves.

The organization, a sketch of which has been now presented, is in accordance with the formation we use at the present day ; it results from the nature of the arms and the manner in which war is now carried on, and the fractions of the army are designed to render the exercise of command easy. The commands are of different kinds, and their character is changed according to the number of troops.

A general fights with 10,000 men ; he must be in the midst of his troops, and often exposed to musket shot.

A general commands 30,000 men ; he puts his troops and reserves in motion ; and if he is habitually, except in extraordinary cases, out of the range of musketry, he must be constantly within that of cannon, and must remain in the limit of space where balls are falling.

A general directs 80,000 or 100,000 men ; he arranges the plan, gives the orders before battle, gives impulsion to the movement, and awaits the events in a central posi-

tion. During the action he becomes a sort of providence; he confronts unforeseen circumstances, and remedies great accidents. He must expose himself before the battle, in order to see for himself and to judge with precision the condition of things; these duties being fulfilled, he gives his orders, and leaves each one to play the part assigned him.

If things go well, he has nothing more to do; if accidents happen, he must parry them by the combinations which are in his power; if the action is progressing very badly, and a catastrophe is to be feared, he must put himself at the head of his last troops which he launches upon the enemy, and his presence, in this extreme moment, gives them an impulsion and a moral effect which doubles their value.

It was thus that Napoleon exercised command. His operations having been almost always crowned with success, and the armies he commanded being of very great numerical strength, he was rarely exposed to imminent danger. But at Lützen a great crisis occurred, and the nature of the army, composed of young soldiers, increasing its importance, he rallied the troops himself before Kaya, and led them to the charge under a deadly fire.*

* According to Thiers, something like this occurred more than once: "Kaya was forced. * * * Napoleon, in the heat of the fire, rallied the conscripts. 'Young men,' said he, 'I had counted on you to save the Empire; and you fly.'" And again: "In the midst of our conscripts, some of whom fled, even in his presence, in the midst of balls and bullets falling all around him, he advanced the Young Guard."—*Le Consulat et l'Empire*, lib. 48.

It must be evident, from what I have already said, what principles have served as a basis for the creation of grades. It has been desired to assimilate them to natural commands, so that the chief may have a social position entrenched from the observation of his subordinates, and always above them, even out of service.

France is the only country where they have omitted, to the great prejudice of the service, to create an intermediate grade between that of general and marshal, for the command of a *corps d'armée*. The dignity of marshal only comports with a command in chief, and the sad experience has been attained that many marshals brought together in the same army, and under the command of one of their own number, almost always lead to great misfortunes, by the want of agreement and of subordination which reign among them. There was necessary an emperor, a great captain, to command an army, the great corps of which are under the orders of marshals. Corps, it is true, were often under the orders of lieutenant-generals, to whom was given the temporary title of general-in-chief, and who received a commission to command. I should add that a commander who had received such power once, was never afterwards called to the command of a single division. But the grade being always the same, it is annoying to establish voluntarily and freely such relations.

As authority, everywhere necessary, is nowhere more so than among troops, and since from the command of an army to that of a company, it is essential that the chief

who disappears should be immediately replaced, it has been necessary to establish, as a fundamental principle, the seniority of command. But it is otherwise with the accidental exercise of this right by the fortuitous result of events in war, (each one feels the necessity of this arrangement;) it is otherwise with the delegation of authority with the same rank, by the will of the sovereign, and when he is master, to choose.

Self-love (*amour propre*) suffers in obeying an equal, especially if he is a junior; and self-love, the cause of so much good and so much evil, exercises, in the profession of arms, an immense power, for it is its very life.

An army composed of men without self-love would be worthless; it is because they are filled with it, that the French are such good soldiers; it is thus also that soldiers furnished by large cities, where self-love is most active, but who are less strong and less robust, often greatly surpass in worth those who come from the country.

CHAPTER II.

OFFENSIVE AND DEFENSIVE WARS.

I HAVE already said, and I repeat it, that movements in war, whether offensive or defensive, must always be based upon a calculation of time and distance. But the applications of this principle are easier in defensive than in offensive war.

In the latter the operations are vaster, the conditions more variable, the elements of the calculation more uncertain. At any moment one may be forced to change his part, to abandon an attack in order to defend himself and to escape great perils. There is needed, therefore, a greater genius, to be always ready to vary his projects, to execute new combinations.

In a defensive war, the theatre is more contracted; the operations are upon familiar ground, the nature of which may be exactly appreciated. The combinations being less in number, it is easier to arrange for them and to confront them. In offensive war, genius must supply the want of experience, and guess at the character of the country in which the operations are made: the points of support upon which we count, vary and sometimes disappear. In defensive war we act upon a field prepared and studied; we have fixed pivots of operation; everything may be calculated with precision. A superior genius is

then more necessary for offensive war, while a great knowledge of the profession, the talent to choose judiciously the points of support, an extreme foresight, with indefatigable activity, may suffice for the needs of defensive war.

Nevertheless this kind of war is far from being easy, because, properly speaking, a general is only reduced to act on the defensive when the means at his disposal are inferior to those of the enemy. Now, in modern wars, with equality of arms, instruction and experience, numbers are of chief avail. The difference which exists between such and such an army, in such and such a campaign, depends particularly on the *moral*; and appreciation here does not belong to the rules of the profession, but to that sublime part of the art which supposes an acquaintance with the human heart, the movements of which are so rapid and so mysterious.

After having settled the *principle* of the movements of armies, we can only develop it by examples.

The instruction is to be found in the study of the most memorable campaigns. Doctrinal teaching must rest upon facts. These may be chosen both in successes and in reverses, by showing in the narration of each event what part was due to combinations and what to chance.

We should study in preference the events of our own epoch: the examples will be better understood, the circumstances being better known. Besides, with the progress which the art of war has made, with the present and always increasing mobility of armies, we have con-

trived to render easy what would formerly have been impracticable. Among former wars, which may still be useful for our instruction, are those of Frederick II. (the Great.) It is true that the examples of that time are scarcely applicable to our days, things have changed so much; but it is in relation to the *moral* of war that we should consider this great captain

When we see Frederick, beaten at Hochkirch, and after having lost two hundred cannon, retire only two leagues upon the Spree, take position there, and brave the menaces of his victorious enemy, we ask in vain for the explanation of a mystery which no one at this day understands.

When we reflect upon the weakness of Frederick's resources, we ask again, how, in the presence of so many enemies, and for so many years, he could maintain and recruit his armies? In truth, we do not know which to admire most, his victories or his power of resources and preservation.

The long wars of our epoch, the great events which they offer to our meditations, all the circumstances of which must be weighed, are equally to be considered, in our armies and in those of the enemy.

The first campaigns of the revolution present nothing in our armies or those of our adversaries, which is not susceptible of a bitter criticism: of this we may easily convince ourselves by reading the first volume of the *Memoirs of Marshal Gouvion St. Cyr*, which in this connection have a very lively interest.

The operations of the Archduke Charles, in 1796, opposing the French armies of the Sambre-et-Meuse, and of the Rhine, are the first example of operations combined systematically on a vast scale; we cannot meditate too carefully upon the work of this prince, in which his principles are established, with the demonstration of his operations and the motives which directed them. All the great principles of war are there deduced, at the same time that they find their application in the facts which are there set forth.

But the campaigns which most demand reflection are those of the French army in Italy, in 1796 and 1797. They all combine exactness in calculation, correctness in movement, a profound knowledge of men and of things.

Never was war so admirable, so perfect. It was the art put in action in its sublimest elements. With moderate means, immense results were obtained.

That one year's war hardly presents models of every kind. But we find an offensive, skilfully and audaciously conducted; a defensive, in which smaller forces constantly repulsed superior forces, by contriving to present often upon the battle-field a superiority in numbers; a war which, by skilfulness of direction and vigor of execution, led to an unexampled series of victories. Immortal epoch, the prodigies of which surpassed all that has been done before or since; for in a series of combats so long, in the midst of so many diverse movements, it is impossible to discover a single error, a single forgetfulness of the true principles of the art.

At the moment of the opening of the campaign, the French army, scarcely thirty thousand strong, lacking everything, has not yet finished its preparations, when it is forced to enter upon its operations, the enemy approaching Genoa to cover that place. The hostile army is attacked, more than fifty thousand strong, but composed it is true of troops of two different nations. The Austrians are beaten, pursued, and soon held in check by a single division. The French army throws itself upon the army of Piedmont; complete and rapid successes spread confusion and discouragement among the allies, and the King of Sardinia makes peace.

A precipitate march surprises the passage of the Po, which the French army, for want of means, could not have been able to force in presence of the enemy. An energetic action gives them the passage of the Adda. Milan opens its gates. A little after this, an insurrection bursts out in an entire province; the insurrection is suppressed. The army, which has hardly slackened its march for a moment, forces the passage of the Mincio, arrives upon the Adige, and takes a defensive position which covers the conquests it has made in less than fifty days. Hostile armies are successively formed, and come to try upon us unavailing efforts. Mantua falls; we march upon Vienna, and peace is concluded.

Nothing could be more useful for the instruction of officers who give themselves up to the study of great campaigns, and to military conceptions of a high order, than to write this memorable campaign, with the details

and the documents belonging to it. Commentaries would be thus united which would explain the philosophy of the movements, and would display their spirit and results. The campaign of 1805, so splendid, so well conducted, and so remarkable in its *dénoûment*, favored, it is true, by the immense and almost incredible mistakes of our adversaries; that of 1806, which completes it; and finally, that of 1809, might be the objects of a special study and of instructive commentaries; for we cannot too much admire this grand epoch of Napoleon's life.

But we must pass over in silence the war in Spain, and the period which follows, or at least only speak of them to discover the errors, and to demonstrate that fortune was right to abandon Napoleon, at the time when he was unfaithful in his conduct to the true principles of war, which up to that time he had always respected. The accumulation of men and means was useless; to date from those epochs of sad memory, if we except Lützen and Bautzen, we do not recognize Napoleon in any of his campaigns.

A sort of awakening came, however, a little later. The great captain discovers himself in 1814; but opinion alone was then fighting for him: he had no longer an army; scarcely were we one against ten. Never did the forces of which Napoleon could dispose in his movements between the Seine and the Marne, exceed thirty-five thousand men, fragments of his former army. My corps,*

* In this campaign of rapid and successful movements, (1814,) the talent of Marmont was especially conspicuous, and nowhere more so than in the movements in and about Paris.

which alone claims the glory of the combats of Champ-Aubert, Vauchamps, Montmirail, the second affair at Gué-a-Tréme, never had four thousand men, the relics of fifty-two different battalions. At Paris, supported by the Duke of Trevisa, (Marshal Mortier,) our united forces were fourteen thousand men, and the enemy had fifty-three thousand engaged, and thirteen thousand *hors de combat*. It was the song of the swan.

CHAPTER III.

MARCHES AND ENCAMPMENTS.

Marches within reach of the enemy cannot be made with too great precaution, nor can **encampments** be selected with too much prudence. Every one knows how the former are executed; but the composition of advanced guards, and the respective position of the arms which form them, must be modified by the nature of the country.

The aim being to gain intelligence of the enemy, and to be informed of his arrival as soon as he approaches, it is most useful to reconnoitre at the greatest possible distance, without, however, compromising the detachments. The advanced guard of an army which is not in presence of the enemy, ought at least to be a day's march from the main body; and that of a division several hours in advance.

Light troops should be intelligently employed, and they should not be spared; for it is chiefly in this kind of service that they are useful: if they allow an army to be surprised, their commander has failed in his duties; he cannot allege a good excuse. It is especially in intersected and wooded countries that precautions must be redoubled. Skirmishers, thrown out on both flanks, should be supported by detachments appointed for them to rally upon, and should be, moreover strong enough to defend,

at need, for some time, defiles which might afford to the enemy the means of turning the flank of the army.

In marches, encampments are made to rest the troops and to satisfy their wants, not at all to fight. An encampment is made, by preference, on the banks of a streamlet, near a village, because the soldiers have the advantage of the water, and the resources which a collected population presents. But however important these considerations may be, safety also must be considered, and the means of resisting an unforeseen attack and a surprise must not be neglected. I am not speaking of guards, who always must cover and surround the camp; they are of prime necessity, were it only in the relation of a police force.

When there is an obstacle, the establishment of camps should be chosen within, and never beyond, at least for the greatest part of the troops. Without doubt it would be advantageous, when the day's march begins, to have passed a defile and to debouche more easily; but this advantage is more than compensated by the security of the repose. If there is no obstacle, or if this obstacle may be easily turned, a surprise is to be feared; a large body of cavalry may suddenly appear, as if it had sprung out of the earth; safety then is to be found in the arrangement of the encampment itself.

There are two modes of encamping: the troops deployed in front of the color-line, and the troops formed in mass by battalion. This last arrangement is far preferable, and offers all kinds of advantages.

It is executed thus:—

A division* is placed in two lines, and each battalion is formed in mass by division; they are separated by two half battalions formed in mass by company. The interval which separates the two fractions is the extent of a division front, and forms a street perpendicular to the front of the encampment.

The tents or barracks are established on the right and left, and the spaces between them are placed so as to open into the street, either directly or by a little cross street. At the moment when the battalion takes its arms, each soldier goes to his own company, which is formed in the street of the camp, and the battalion is formed at the very instant, and ready to march. If the impetuosity of a mass of cavalry is such that it precipitates itself upon the camp, it will find all the troops in mass, and, so to speak, entrenched in the midst of their tents and barracks.

Contempt of the foregoing rules led, on the 29th of May, 1813, near Haynau, in Silesia, to a fatal event.

The division Maison,† which had marched the whole day, and taken position without proper reconnoissance, was surprised: twenty-two Prussian squadrons, in ambuscade in a neighboring forest, suddenly debouched, at the

* The division here referred to is a mass of troops comprising two or more brigades; the word as used immediately afterwards means the union of two companies. The double use of the word has often led to confusion.

† The divisions of the French army receive the names of the generals commanding them.

moment they were establishing the camp; the division was in great part destroyed without having been able to fight.

In another circumstance, the same negligence on the part of the Prussians gave us a splendid revenge, and caused us to obtain an easy victory.

After the combat of Champ-Aubert, (February 10, 1814,) in which my *corps d'armée* had, unaided, destroyed or taken almost entire the Russian corps of Olsufieff, the Emperor ordered me to proceed to Etoges, to cover the army on that side, while he should march upon Montmirail, which was occupied by the corps of Sacken. Sacken, beaten, retired upon Chateau-Thierry, where he crossed the Marne to stay the pursuit of Napoleon, who had followed him. During this time Blücher, in person, had advanced with the corps of Kleist, and had marched upon Etoges: on the 13th he undertook to force me to evacuate this advantageous post. After having made a feint of desiring to defend it, I retreated. The enemy followed me closely, but with great circumspection, and there were until evening only weak engagements with light troops. I took position on the skirt of the forest of Fromentière, and the enemy encamped at about twice cannon range from me. I had announced to Napoleon the arrival of Blücher, and had advised him of the movements I was going to execute: I was assured of his prompt return. On the 14th, at four o'clock in the morning, I set my force in motion to approach Montmirail, and I sent an officer to obtain intelligence of the Empe-

ror. He had just arrived, and sent me word that I might attack the enemy whenever I thought proper; that he was in condition to support me.

There is in front of the village of Vauchamps, on the side towards Paris, a position advantageous and easily defensible; it is the slope of the plateau which borders the small valley on which Vauchamps is built; to the right and front, a wood presents the means of taking in reverse all bodies which should advance inconsiderately without having occupied it. I caused this wood to be occupied as quietly as possible; I deployed my troops on the hill, I put my cannon in battery, and we awaited the enemy.

The corps of Kleist, the strength of which was four times that of mine, thought it had nothing to fear, and marched with extreme confidence, the troops being in column, and touching, without any interval between them, and even without scouting: finding the village unoccupied Kleist passes through it, but, assailed by a murderous fire of artillery and musketry, attacked at the same time in front and flank, thrown into confusion, he flies from the village in great disorder, and, our cavalry pouncing upon him, four thousand prisoners fall into our hands. From that moment the enemy, who had no regular formation, withdrew in mass until evening; while that day, so splendid for us, terminated for him in a new catastrophe.

The victory of Hohenlinden, the brilliancy and the results of which were so great, is an event of the same nature. The centre column of the Austrian army, which

followed the high road, and to which had been united a great part of the artillery of the flanking columns, to facilitate their transportation, outstripped the other columns, and was marching without proper scouting parties, by reason of the confidence imparted by the combat of the evening before, and the belief entertained by them that the French army had beaten a retreat.

They encountered the French unexpectedly in the very middle of the forest. Attacked vigorously before they were able to take the necessary dispositions to resist, and soon taken in flank, this immense column of *materiel* was captured, and the battle won.

There is nothing more delicate or more worthy of attention than how to conduct a numerous artillery through a very wooded country, in presence of the enemy. Whatever may be the desire for keeping it together, too much precaution under such circumstances cannot be taken to guard against surprise, for the consequences of the slightest negligence are almost always fatal.

On the 29th of August, 1813, after the battle of Dresden, I was charged with pursuing the enemy's army, the main body of which was retiring by the Altenberg road. After having beaten, at Possendorf and Dippoldiswalde, the corps which covered the movement of concentration, I was to continue, the next morning, my march upon Falkenheim. Arrived at the village of Frauendorf, I learned that the enemy occupied, with a strong advanced guard, a good position at Falkenheim. Before entering the forest which must be crossed, and which some light troops occu-

pied, I had it searched and cleared by three or four thousand infantry, extended upon a very long front. Having cleared the forest, I took a position upon the skirt of it with my advanced guard, and I waited until my whole corps had joined me. I debouched then with all my force: in a moment the enemy was overthrown and driven from his position, abandoning almost all his artillery.

There are also marches executed in presence of the enemy, with your army entirely united, formed and ready to fight, having the design of causing the enemy to leave a position which he is occupying. These marches belong to tactical movements; nothing demands greater attention or exacts greater precautions.

To execute a movement of this kind, the troops must be well disciplined and thoroughly drilled, the generals vigilant and active, and the commander possessed of extreme foresight.

The army of Portugal, in 1812, under my command, made such a march successfully.

The French and English armies were encamped on the two banks of the Duero; the former was inferior to the latter by about 6000 foot and 4000 horse.* In spite of the disproportion of force, I was obliged to assume the offensive. I was informed, by official correspondence, that no important succor could be afforded me; and, on the

* Earl Ellesmere, in the article before alluded to, (Foreign Quarterly,) disputes this assertion: proving from the morning reports of the French and Anglo-Portuguese armies, for that day, that the disparity was only 2500 men.

other hand, the English army, already so superior, might in a few days receive powerful reinforcements from Estremadura by the bridge of Alcantara, while the army of Galicia, which was blockading Astorga, was going to be disposable, and to operate in my rear, in consequence of the surrender of that town, which, for want of supplies, was on the point of opening its gates. I concluded that to change the condition of things, I must assume the offensive, prudently indeed, to manœuvre so as to force the enemy to retreat, and not to fight unless it should be necessary. The passage of the Duero was then resolved upon and executed.

The French army, united, encountered the next morning two English divisions at Tordesillas de la Orden, which hastily retired; they were closely pursued, (*l'épée dans les reins,*) and would probably have been destroyed, isolated as they were, if the French cavalry had not been inferior to those of the enemy.

The two armies were posted on the evening of that pursuit, facing each other, and separated by the Guaréna, a marshy brook.

On the 20th of July, the French army, formed in order of battle, broken by company, made a flank manœuvre by the left to ascend the stream; having arrived at a crossing known beforehand and promptly improved, its head crossed to the left bank, laid hold at the outset of a plateau which extends indefinitely in a direction threatening the enemy's retreat, and debouched there under the

protection of a very large battery which covered its movements.

The Duke of Wellington thought at first that he would be able to oppose the offensive march; but it was so rapidly and unitedly executed, that he soon renounced the idea of attacking.*

He then set the English army in motion, following a plateau parallel to that which we occupied.

The two armies continued their march, separated by a narrow valley, always ready to accept battle; some hundreds of cannon shot were exchanged, according to the more or less favorable circumstances to which the sinuosities of the ridge gave rise; for each of the generals wished to accept battle, and not to attack. They arrived thus, after a march of five leagues, in the respective positions which they desired to occupy,—the French army upon the heights of Aldea-Rubia, the English army on those of San Cristoval.

This remarkable march is, moreover, the only fact of that nature which, to my knowledge, has occurred in our days. But it may be renewed, in a war in which the forces are about even, and when the generals do not desire to fight except with assured advantages, or in determined and very favorable circumstances.

* The Duke of Wellington told me afterwards that the French army marched, on that occasion, like a single regiment. That was his expression.—M.

CHAPTER IV.

OF RECONNOISSANCES IN FORCE, AND THE PRECAUTIONS
THEY REQUIRE.

To know the position of the enemy, to have timely information of the movements he is making, to collect sufficient intelligence to guess his plans,—these constitute one of the greatest difficulties which the command of an army habitually presents. Nothing should be neglected by which we may obtain exact information, and the surest method is always to be in contact with the enemy by means of light troops, frequently to have small engagements, and to make prisoners, whose answers are almost always simple and sincere. More is learned through them than by means of the most faithful spies. The latter often confound the names of corps and of generals, and form very inexact estimates of the strength of the troops concerning whom they report. When two armies, by the combinations of war, find themselves suddenly in presence of each other, or have remained a long time at a certain distance from each other, it is important to be most positively assured of the situation of things: to this end, there are made what are called **reconnoissances in force**, (*grandes reconnoissances*.)

These operations demand much prudence, and even an especial foresight, particularly if we have not decided to

fight, except under extraordinary and very advantageous circumstances.

Cavalry should be principally employed; and, if possible, only cavalry and light artillery should be engaged, so that we may remain master of our movements. What is to be done is to tear away the curtain which conceals an army; and when a general has been able to penetrate sufficiently to see with his own eyes the situation of the enemy, he has accomplished his purpose.

But he must make such dispositions as to sustain the troops engaged, and to receive them if they are hurried backwards. He should have quite within reach a respectable body of infantry; and in rear of that corps, the whole army should be drawn up for an immediate march, if circumstances require it, to take part in the action. A moment of delay might cause the loss of sudden opportunities, which, properly seized, give unexpected advantages.

I will cite an example in which the non-observance of this precept prevented me from gaining an easy victory over the English army in Spain. Instruction is perhaps better conveyed by recalling mistakes, than by relating successes.

In 1811, I was occupying the valley of the Tagus, with the army of Portugal. My mission was to guard the safety of two strongholds which covered the north and south, Ciudad Rodrigo and Badajos, which belonged to the armies of the south and north, and formed part of their field of action. Ciudad Rodrigo, being in want of

provisions, General Dorsenne, commanding the northern army, organized a great convoy, and made his dispositions to conduct it thither. He furnished 10,000 infantry and 2000 horse for its escort. But the concurrence of the army of Portugal was necessary to render its march safe, the English army being in cantonments very near. I took the greater part of the army beyond the hill of Baños, and placed it in echelon from Tamames to the river of Aguéda. I repaired to Rodrigo with 1500 horse; General Dorsenne went there also, and introduced into the city, with great supplies, a small division of 3000 infantry, commanded by General Thiébault. The rumor was rife that the English were making arrangements to besiege Rodrigo, and that provisions within reach had been collected there. To gain correct information was opportune, and it was agreed that a strong double reconnoissance should be directed upon the Almeida road, and on the heights of Elbodon, where the English army had its advanced posts. This reconnoissance was to be made by the cavalry of the army of Portugal, commanded by General Montbrun.

General Thiébault received orders to be ready to sustain him if necessary. The position of Elbodon being captured in a moment, the cavalry of the English army was put to flight, and a brigade of English infantry found itself isolated. After having bravely received several charges, it retreated upon Fuente Guinaldo. Favored by difficult ground, and thanks to the rapidity of its march and its valor it could not be destroyed. Fuente Guinaldo,

the knot of the roads, and the strategic point for the assembling of an army, must then be occupied without delay. The division Thiébault was called upon; but placed at too great a distance, because it had only come out with the design of defence and security: the field of battle being singularly distant on account of the retreat of the enemy, it arrived too late, and its extreme weakness did not permit, at the very verge of nightfall, that it should be launched upon the entrenchments of Fuente Guinaldo, upon which columns coming from different sides were directed. If 8000 men had been in my hands, I could have acted confidently. Fuente Guinaldo would have fallen into my power. The light division posted at Martiago, upon the right bank of the Aguéda, would probably have been taken or destroyed, the English army dispersed, and its corps, without union, would have been in the most critical position. Having had the time to reassemble, it hastened to make good its retreat, and the opportunity of an easy and complete success was thus lost.

I repeat it, when a strong reconnoissance is made, troops should always be arranged in such manner as not to be forced to accept a serious battle; but, at the same time they should be in relative position, either to reassemble the troops engaged, if they are beaten, or to profit by a fortuitous and favorable circumstance. Whatever consideration is entertained for an adversary, he should never be thought infallible; fortune often smiles at the moment when we least expect it; and we should always be prepared to prove to her that we are worthy of her favors.

CHAPTER V.

DETACHMENTS IN PRESENCE OF THE ENEMY; THE PROPER TIMES FOR MAKING THEM, AND THE DANGERS WHICH ACCOMPANY THEM.

SOMETIMES a general, too much preoccupied with the idea of a success for which he hopes, makes in advance, without having beaten the enemy, arrangements for giving a grand result to victory. To this end, he divides his forces and launches them in different directions. Instead of conquering, he is beaten. The detachments he has sent out are captured or destroyed, and a campaign opened under favorable auspices, is now but a succession of reverses.

I will cite several examples in support of my assertion.

In 1796, in Italy, Wurmser enters upon the campaign with an army superior to that of the French; a column turns the French flank, and marches by Brescia, upon their communications. This column, too weak to resist the united French force, retires upon its approach. Separated from the greater part of the army, by the mountains and the Lago di Guarda, it is ignorant of the events which are transpiring; and the French army, placed in the centre, beats, one after the other, all the corps which successively present themselves.

In the same year 1796, General Alvinzi debouches from

the Tyrol, and attacks the French army, occupying the chain of Monte Baldo and the Corona. Believing a victory certain, he detaches a body of 5000 men, commanded by Colonel Lusignan, who, after having followed the border of the Lago di Guarda, changes direction, approaches the Adige, and takes position in rear of the French army, and on its direct line of communication. This corps is held in check by the weak division of Rey, who, having rejoined the army, established himself in front of it. The battle was gained by the French army; and the corps of Lusignan attacked, routed, and almost entirely captured.

In 1800, Napoleon debouched into Italy with an army of 60,000 men. Having crossed the Po, and completely turned the Austrian army, he found himself upon their lines of communication, with the design to take possession of all the roads by which they might attempt to retire.*

To achieve that, he placed on the Tessino a part of his force on the right bank of the Po, while, of necessity, he sent upon the Adda and Oglio one division to cover himself in that direction. Then, supposing that the Austrian army, united, would desire to make its retreat upon Genoa, he detached a division in the direction of Novi, to shut that route against him. There only remained to him 22,000 men, and the enemy had 45,000 united on the

* There remained to the army which fought at Marengo, only the corps of Victor, formed of the two small divisions Gardanne and Chamberlac; the corps of Lannes, composed of the divisions Watrin and Monier; the division Boudet, 5000 strong; a very weak cavalry, and thirty-two pieces of artillery.—M.

Bormida. The enemy attacked him; the battle of Marengo was fought; obstinately disputed, it seemed lost at five o'clock in the afternoon, when the division detached toward Novi arrived. General Desaix,* who was at its head, had wisely halted it, on hearing the cannon of the battle, to await orders. He retraced his steps, and arrived in time to act as a reserve, and the battle was gained, although only 27,000 men had been at one time in action, and 22,000 had been forced to bear the entire weight of the battle. Thus our forces engaged were, on this occasion, only two-thirds of the enemy's force; and it was a bare chance that made them more than one-half. A splendid victory doubtless, the results of which were immense; but it would be dangerous to take as a model the strategic combinations which led to it; for it ought to have been lost, on account of the superiority of force and the means which opposed us.

If victories are possible under such conditions, we should not too much count upon them. We should doubtless display all the more energy in proportion as the circumstances are less favorable; but unwonted sanguineness must not give birth to them.

* Desaix and Kellermann retrieved the fortunes of the day.

“Simple, timid, even awkward, his face always hidden under his long and flowing hair, Desaix had not a military appearance; but heroic under fire, kind to his troops, modest among his comrades, generous to the vanquished, he was adored by the army. * * * His mind solid and profoundly cultivated, his knowledge of war, his attention to his duties, and his disinterestedness, made him an accomplished model of all the warlike virtues.”—THIERS, *Le Consulat et l'Empire*.

In 1813, the French army of Silesia, more than 80,000 strong, united at Goldsberg, commanded by the Marshal Duke of Tarentum, (Macdonald,) was opposed by an army nearly equal, commanded by Blücher. The Duke of Tarentum advanced upon the enemy, whom he supposed to be in force at Jauer; at the moment of moving he detached the division Puthod, to march through Schönau upon Jauer, to find the enemy and to take him in flank.

But Blücher at the same moment assumed the offensive on his side; the French army, badly informed, met the enemy unexpectedly near the Katzbach, and was obliged to accept battle without having united its forces. Bad combinations and a series of misfortunes led to confusion. The French army was beaten, and forced to fall back, the division Puthod lost its communications; cornered at Bober, outflanked, overpowered by numbers, after having fought valiantly, it was taken almost entire.

There result from the foregoing examples, and from many others which I might add, the following conclusions:—

1. Nothing is more dangerous than to make an important detachment, before having given battle, gained a victory and acquired a decided ascendancy over the enemy.

2. The execution of such a hazardous combination requires that an army should have a sufficient superiority to give great probability of victory: and its strength should never be so weakened as to be less than that of the enemy in front.

3. When we are at a distance from an enemy, who is

strong enough to offer us battle, and are marching towards him, we should occupy, by advanced guards and light troops, at least the space of a day's march distance around us, so as to be informed of his movements and modify our own in consequence.

4. Finally, when we think proper to make a single detachment, its direction must be determined, and succoring troops placed in such a manner that it will always have an assured retreat upon the main body, and can in no case lose its communication.

CHAPTER VI.

BATTLES.

To treat in detail of the dispositions which the **conduct of a battle** requires is impossible: a thousand unforeseen circumstances force us to modify them; fortuitous accidents occur to change our whole economy. I will limit myself then to recalling and stating the rules to be followed, and the principles to be respected, to prepare a battle and to distinguish its proper character. As to the **manner of giving battle**, nothing can be more variable. It differs according to the nature of the operations to be executed, and the kind of mission which the army has received. It varies with the composition of armies, and the special character of the troops; it varies also by reason of the talent and the kind of faculties possessed by the generals who command.

I shall enter into very few technical details as to the formation of troops, and the preliminary plans; for these dispositions depend particularly upon the nature of the ground on which the battle is to be fought. Thus, for example, it is evident that a position near a field of battle which may serve for a base and support, should be occupied in force, and in such a manner as to exercise a salutary influence, whether we attack or defend. The strength

of a position supplies what is wanting in the number of troops: defiles placed in front render a part of the means of defence superfluous, and the means of attack more difficult. As to the rest, the simplest reasoning—often instinct alone—suffices to make us feel the modifications necessary in those formations established by usage. I will state, in few words, that, all local influences apart, there has been adopted, as a fundamental principle, the formation of troops on many lines. The first line deployed, the second in column by battalion, at deployment distance, ready, if there is need, to march or to form into line; and a third line, composing the reserve, in column by brigades, ready to march wherever it can become useful

I will, however, make one observation upon general dispositions; it is that the command of troops should be devised so as to embrace the two lines at once; that is, that these corresponding parts be under the direction of the same commander. The reason of this is easily conceived. As the second line is destined to sustain the first, it is necessary that the movements of the corresponding fractions in the two lines agree perfectly. It is not the same with the reserve; it forms a complete and independent corps, which should have all its means united to act according to the circumstances; thus, a *corps d'armée* of four divisions, in disposition to offer battle, should have, in my opinion, the following formation:—

In the first line, three brigades of three different divisions, and in the second, the three other brigades of the

same divisions; and the fourth division in rear, entire, and formed in two masses, each of a brigade.

The cavalry should be thus placed:—that of the divisions, on the flank or in rear of their respective divisions, and the masses of cavalry formed in several lines, and on the flanks of the army, abreast of the second line; and, in preference, on the side where the country is most open and most favorable to its movements and its action.

As to the artillery, that constituting the reserve should hold itself in rear of the infantry reserve, ready to move wherever it should be needed.

Finally, I will add that the art of directing a battle well consists particularly in the judicious and timely employment of the reserves; and the general who, in a hotly-contested battle, has fresh and disposable troops at the end of the day, when his adversary has used all his, is almost certain of the victory.

I will now establish the character of battles, by dividing them into two classes: **defensive** and **offensive**.

For the first, the conditions of success are: the choice of a good position, the flanks of which are well posted, and the rear free and protected; obstacles, which render the enemy's approach more difficult, in front; finally, brave, disciplined troops, commanded by an energetic and determined man.

Offensive battles require, more than all else, good strategic combinations and skilful tactics: troops easily handled, good marchers, nimble, and intelligent, with a decided dash about them. The soldier must be ambitious of suc-

cess, as though it belonged to him personally, and he must associate himself with the idea of it in advance.

In applying these observations, which I regard as of rigorous importance, to the character of different armies, and in taking as examples troops which have the least resemblance, we observe that the genius of troops in these two conditions belongs eminently to the French, for offensive battles, and to the English, for defensive. If we observe, besides, that, in offensive war, the difficulties of administration and of the subsistence of troops are immense, while, in defence, only money and will are necessary; if we reflect, finally, that the English army, by its composition, its customs, its needs, requires, more than others, abundance,—we shall be more and more forced to the conclusion that defensive war, with all its consequences, is more in keeping with the faculties of the English army, and that it would be less easily waged by a French army.

The events of the war in the Peninsula, still present to our remembrance, demonstrate this truth. The English general, whether by his nature and his own character, or by his skill in seizing the conditions in which he was placed, comprehended, from the beginning, the system he ought to follow, and never departed from it.

For a long time he perseveringly made use of a powerful auxiliary which the force of circumstances offered him,—our misfortunes; he did not cease to make the most of them. His army, abundantly provided with everything, able to unite every day, had constantly the power of motion, was always threatening: military and political calcula-

tions alone gave motive to its operations; while the French army, abandoned to want of every description, and to labors of all kinds, was daily losing its means and its strength. If a position was impregnable, the English general occupied it, and waited until it was in danger of being turned, or until the French army should come to dash itself against insurmountable natural obstacles, consuming its valor in pure loss.

Thus, when Marshal Massena,* at the head of a superior army, threatened to invade Portugal, Wellington placed himself behind two strongholds, and, covered besides by the Coa, he waited until the French army had exhausted a part of its means in two sieges; abandoning to the fate of war the garrisons of these two places, which did not belong to his army, he retired, when they capitulated, and when he might fear being attacked himself, to go and take position at Busaco. After having repulsed the French army which attacked him inconsiderately, he withdrew and disappeared, when it was manœuvring to turn him, and the English army retired into the lines of Lisbon,† where art had aided nature with powerful means of resistance. (1810–11.)

* Andrea Massena, born at Nice, 1758; at the age of 17, a private in the Royal Italian regiment; passed through the grades of corporal, sergeant, lieutenant; retired from the army in 1789. General of division in 1793, and renowned for skill and bravery throughout the wars of the Empire. Such was his good fortune that Napoleon called him the "favored child of victory." His great fondness for money has been much censured. He died in 1817.

† These are commonly called the lines of Torres Vedras,—fifty miles of fortifications enclosing Lisbon. Nothing else could have

The English general waits patiently for famine and misery to disorganize and destroy the French army; he follows his system in a manner so rigorous, that he allows them to remain unattacked, although they are in sight and within range of his guns, and not in condition either to offer battle or oppose a serious resistance, weakened as they are by the absence of fifteen or twenty thousand men, who, leaving their arms stacked, range fifteen or twenty leagues, seeking provisions in the interior of Portugal. Reduced to nearly one-half, the French army returns into Spain, after having abandoned all its guns, all its *materiel*, for want of horses to take them away; and three-quarters of its cavalry are on foot. It has experienced immense losses, although it has not fought, except at Busaco, and has only had during the retreat two combats of small importance.

Wellington always followed an analogous system; and when later, at Waterloo, he found himself confronted by Napoleon, it was again a defensive battle which he fought.

We see then that, in a defensive war, which is always a question of time, battles must be rendered as rare as possible, because marches and various circumstances injure and sometimes destroy the means of an adversary, more certainly than the most signal victory could do.

saved Wellington's army from the most disastrous defeat. Once within these lines, the English were plentifully supplied by the Tagus and the sea, while Massena, without supplies, was obliged to retire, after ineffectual attacks.

As to the particular circumstances of defensive battles, they should always be delivered in front; and the talent consists in forcing the enemy, by dispositions wisely conceived, to attack where we have been able to prepare the easiest resistance. But there are also battles which, beginning with an offensive movement, are reduced, in the action, to a defensive combat; this is what happens when prudent and circumspect generals, placed at the head of forces nearly equal, wish to bring on a battle.

In 1812, an example of this kind was offered: the English army was superior to the French army by 8000 infantry and 4000 horse. The French general, after having been a long time upon the defensive, in expectation of promised succors,—having been informed officially that they would not be sent him, was obliged to assume the offensive, in order not to see, day by day, his situation growing worse.

But on taking the offensive, and, by strategic movements forcing the enemy to fall back, he did not wish, resolved as he was to fight, to renew by a rash attack the events which had taken place before. He desired, if there were a battle, that it should be delivered upon a ground of his own choice; that it should be received and not given. On the other hand, the English general, faithful to his system, equally proposed to himself to reduce the action to the defence of a position. Hence the remarkable movements which took place from the Duero to Tormes towards the middle of July, 1812.

This system being followed, on either side, the English

army was obliged to make a retrograde march. Its return upon the Aguéda, and its re-entrance into Portugal, would incontestibly have been the immediate result of that part of the campaign, if a movement had not been executed without orders in the French army, and if the marshal who commanded it had not received a severe wound three-quarters of an hour before the battle; from this, want of certainty occurred in the command which hindered the timely repairing of mistakes, and brought on an action which should not have been risked until later, and under better auspices. In spite of these drawbacks, the loss was equal in the two armies.

Although I firmly believe that French troops, well commanded and properly provided, are fit for all kinds of war, I think nevertheless that offensive war is more in keeping with the spirit, the nature and the character of our soldiers: it was especially the distinguishing characteristic of Napoleon's genius.

I have already said that no one ever possessed in a higher degree than himself strategic talent; and his offensive marches, until the Russian war, were skilfully conceived. The power of the means of which he made use, their energy, the moral force which animated them, his activity, the absolute freedom in his projects and his combinations, precipitated events, and in exalting the spirit of his soldiers, overwhelmed the enemy with discouragement in advance; and there is not much space between the fear of being beaten and a defeat. What a series of splendid operations, executed in a magical manner!

At his *début* in Italy, he turns all the positions and beats the enemy in detail, before they are able to collect their forces. He passes the Po without having the enemy before him, because he has prevented that by his movements. The war becomes defensive; but soon he changes its character, and, by attacking, he rediscovers the application of his own special genius.

In 1800, he enters Italy, and forces the Austrian army to receive battle in the most fatal position, with the most annoying conditions, after having lost its communications and its points of retreat.

In 1805, the direction of his armies alone, which he leads in mass upon the Danube, after having displayed heads of columns in the Black Forest, to fix the attention of the enemy, decides the question of the campaign; for if Mack,* instead of having brought upon himself, by a foolish confidence, the catastrophe of the Austrian army, had withdrawn, this simple movement would have placed us in possession of the whole of Bavaria.

At Austerlitz, it was a tactical movement which, in a few hours, settled the fate of the battle. At Jena, the same prodigies were effected by the same means. As long as this system was followed, similar successes crowned all the enterprises of Napoleon.

In 1809, at the opening of the campaign, before Ratis-

* Charles, Baron von Mack, an Austrian general, incompetent and unfortunate. His capitulation of Ulm, here referred to, was foolish and cowardly. He was tried, and sentenced to death for it, but the sentence was commuted, and afterwards remitted.

bon, the same spirit directed his operations. But soon his system changed: the passage of the Danube, after having failed the first time, was executed with success, and followed by a battle gained on the plains of Wagram. Here it was a direct attack in front which constituted the battle. Moreover, circumstances did not allow him to choose. The passage of a river like the Danube is not an easy thing, and cannot be made secretly; and when an army, posted upon the opposite bank, wishes to contest it, we must resolve to fight at the moment of landing the first troops; then the accumulation of means and energy alone give the pledge of victory.

In 1812, it depended upon his own will to give to the great battle, which he fought upon the Moskwa, the character of his preceding victories. A simple flank movement would have permitted him to fight the Russian army with much greater advantages, by cherishing the chance of far greater results. But a decided taste for direct attacks already begun to manifest itself in him, a taste for the pleasure of employing force, and a kind of disdain for the concurrence of art and skilful combinations. He conquered, but with immense losses and unimportant advantages.

In 1813, his applications were varied.

At Lützen, being surprised, the battle commenced by being defensive, but it soon became offensive.

At Bautzen, the strategic movements were skilful and well conceived.

But, at Leipsic, we are fain to ask how Napoleon, who

had choice of the theatre of operations, could, of his own accord, have chosen a theatre so little advantageous, and which, according to the simplest calculations, must prove fatal to him? The battle of the 18th of October was defensive, and offered no chance of success, because the battle of the 16th had not been gained, and the enemy on the 17th had been reinforced by 150,000 men. He should by all means have avoided it, and withdrawn without delay.

In France, the battles of Brienne and Craon, that of Laon, that of Arcis, could not produce any advantage, whether in the concentration of force, or in the direction of the attacks; all the operations of this period were of necessity limited to partial movements, directed against separate corps. In these, all that could be done was to exercise the remaining energy of the French army; these combinations, moreover, belonged to the genius of Napoleon, who then made many happy applications of them, as at Champ-Aubert, at Montmirail, at Vauchamps, at Montreau, by giving to an obstinate defensive, an offensive character, which was the fundamental basis of his talents.

But, finally reduced to the necessity of a battle, by the reunion of all the enemy's forces, and compelled to fight, he was obliged to resume the defensive, to choose a position at Paris, to fortify it, to collect all his means and those of the capital, which alone could support him, and to make a last trial of fortune.

If 14,000 men, fragments of his army, abandoned to

themselves, were able—in an open country, without a single artificial work to support them, deprived of the succors which the city ought to have been able to furnish them, by the disappearance and flight of the higher authorities—to resist for ten hours the colossal forces assembled before them, of whom 54,000 were engaged and 13,000 put *hors de combat*, we may judge what might and ought to have happened, had the combatants numbered 30,000, under the protection of good works, which would have tripled their force, and aided by the means of Paris, the action and concurrence of which would have resulted from the presence and authority of Napoleon.*

But this kind of resolution did not belong to his genius; he did not wish to foresee it, nor to prepare for its execution; he had placed, in last resort, the lever of his power solely in opinion. But if this power of opinion is immense, its only durable effect rests upon the condition of being based upon something positive and real.

One word more upon offensive battles. At what hour should they be fought? This is a question worthy of examination, as it is of great importance.

When we have the choice, the hours should be varied according to circumstances. Have we a decided superiority, which authorizes a firm confidence in victory? The attack should be made early in the morning, that we may

* The reader is again reminded that Marmont was a participator in these movements executed by Napoleon in France in such a masterly manner in 1814. He was in command at Paris, and to him is due the gallant defence, against great odds, to which he refers without a mention of himself.

profit by the successes obtained. Every true soldier will recall the chagrin he has felt in the midst of success, on seeing the arrival of night; and the impatience with which it is expected in case of reverse.*

Again, the attack should be made as soon as possible, when we have all our troops in hand, while the enemy has not yet assembled his own. We ask in vain, why Napoleon at Waterloo, in the longest days of the year, only attacked the English at eleven o'clock in the morning, although he knew, by an intercepted letter from Blücher to Wellington, that the first Prussian columns could not join the allied forces until four in the afternoon; for, if Napoleon should be victorious, he would present himself to the Prussian army, after having beaten the English; and if his arms should be unsuccessful, he would at least avoid having upon his hands a second army in the midst of the combat. †

Great military questions may almost always be reduced to simple ideas, and the axiom here stated is that we have more chances of success in fighting one to one, than one against two.

* The reputed exclamation of Wellington at Waterloo is a case in point;—"Night or Blücher!"

† Marmont had at this time accepted a position under the Bourbons, and his criticism is considered prejudiced. But Napoleon's friends have tried in vain to answer the question proposed. The muddy condition of the roads, which rendered the movements of cavalry and artillery difficult, has been alleged in defence. They could not have dried much by eleven o'clock, and the splendid charges of Milhaud's cavalry disprove this excuse. The truth is, his conduct here is in keeping with the singular irresolution manifested on the few previous days.

But when forces nearly equal render victory uncertain, it is better to attack towards the middle of the day; the consequences of a reverse are less formidable, and a general must above all think of the preservation of his army. The destruction of the enemy holds only a secondary place in the order of duties and interests. Moreover, if the question remain undecided, we have the whole night to prepare a new attack and other combinations. Besides, the troops are well rested, they have been able to breakfast before the combat; they are in conditions of force and energy. On the contrary, the defensive army, preoccupied and agitated, cannot give itself up to such complete repose, and often sees its morale injured in proportion as the moment of action approaches.

In the midst of our triumphs in Italy, two slight reverses had occurred on two succeeding days, at Cerea and Alle Due Castelli, in consequence of the extreme fatigue and a little disorder which existed in Massena's division. As it was important not to let Wurmser come out of Mantua, and to guard against a new check, the troops were rested until noon; they only took arms after their dinner, and the victory of San Giorgio was not for a moment doubtful.

To sum up:—defensive battles belong more to war as a profession; offensive battles, well planned and well conducted, are the appanage of genius. Such was the true character of the wars of Frederick II. (the Great,) for the great defensive war of seven years almost always had an offensive character; and, in this respect, his cam-

paings strongly resemble many campaigns of Napoleon, with the simple differences of the period and the state of military science.

In attentively reading the narrative of the action of great generals, we may recognize the kind of troops which they have commanded, by the manner in which they have employed them. We may even recognize their own character; for it must be admitted that those who have excelled in a particular kind of war had a special genius for it. Natural instinct, if not our best guide, at least powerfully contributes to develop our faculties.

In all ages, great generals have impressed upon their operations an individuality; the same operations, conducted by men whom we most frequently compare, present, upon reflection, essential differences. The campaigns of Turenne and the great Condé are not at all similar; and it is the same, in antiquity, with Alexander, Cæsar and Fabius, Hannibal and Scipio.

A skilful general must, then, on entering upon a campaign, possess himself thoroughly with the conditions in which he is placed, by the nature of his troops, their number, the object assigned to him, and the means at his control; and he must provide, even though contrary to his own taste, the best modes of employment which it is proper to give them.

CHAPTER VII.

THE CONDUCT OF A GENERAL THE MORNING AFTER A VICTORY.

GENERALS who gain battles are less rare than those who know how to profit by victory. It is sometimes said that the battle is the aim, while in reality it is only a means. This is to be remarked particularly in the wars of former times, but in our own times even examples have not been wanting.

An ordinary general is only struck by the losses he has experienced, and hardly has a suspicion of those of the enemy; hence arise fatal indecision and timidity, instead of confidence which everything would authorize.

In 1795, Schœrer, after the battle of Loano, could, without a serious engagement, have invaded Italy. In the same year, Clairfait, after his signal victory before Mayence, could have arrived under the walls of Strasbourg, if he had marched without delay. In 1800, Moreau, by rapid movements, could have completed his successes at the opening of the campaign. The same year, in Italy, Brune, after crossing the Mincio and the Adige, could have destroyed entirely the Austrian army, which was retiring before him; so favorable were the circumstances, that the least energy would have sufficed.

Napoleon is the first, in our epoch, who has drawn from victory all the consequences of which it is susceptible.

After gaining a battle, he marched with rapidity in pursuit of the enemy, in order to obtain easy successes, and to rob him of the little confidence which remained. With such a system, a new battle was rarely necessary in order to attain an important end.

Doubtless in such marches a general is not much occupied with providing for the wants of his army. Disadvantages result from this, but much less than the advantages which are assured. As, moreover, the march is generally through a fertile country, amidst a compact population, the sufferings of the soldiers are thus moderated; that rapid march is soon ended, and an important pledge, with immense resources, falls into the hands of the conqueror. Then abundance and rest give power to repair losses, and, besides, to augment the means of progress. Whenever Napoleon made war in Germany, he acted thus and was successful. Vienna, twice occupied, furnished him incalculable resources, and gave a pledge which was of great value in the subsequent negotiations.

But there is a limit which cannot be passed with impunity. When this system of war was applied to Russia, it was no longer a question of ten or twelve rapid marches, in a country filled with resources, and in the midst of a gentle population, accustomed to respect rules and to obedience; it was an offensive movement of nearly three months,* almost without halting, in a poor country, offer-

* Passage of the Niemen, the 28d of June; entry into Moscow, the 14th of September. The movement consumed eighty-three days.—M.

ing the weakest resources, and a population often hostile; and the object of this movement was not to pursue a conquered army, but to reach an army which was falling back upon its own means, while we were using ours in marching only, by sufferings of every kind to the soldiers;* sufferings which soon engendered a sort of disorganization. Napoleon was thus running upon certain loss.

If then it may be laid down as a great principle in war, that a general should endeavor to profit by his successes, and neglect nothing to complete them, by the rapidity of his movements in pursuit of a vanquished enemy, it may also be seen that there are limits to this rule, and that its application should be subordinated to special circumstances.

But if a serious pursuit is to be undertaken, compact and powerful means should be devoted to it, means capable of surmounting all obstacles. Otherwise, by being forced to halt in the midst of the undertaking, we allow the enemy to recover his *morale*, and permit those advantages upon which we had a right to count to escape us.

After the battle of Wagram, Napoleon gave me, on the 8th of July, (1809,) the command of one of the advanced guards of the great army. Massena was following the main body of the enemy's army, which was retreating by the Hollabrun road. I was thrown forward upon the

* The first corps, at the beginning of the campaign, was 80,000 strong; at the review in Moscow, it numbered 15,000.

The French cavalry of the line had, on entering upon the campaign, 50,000; at the review in Moscow, it had 6000.—M.

Nicolsburg road, in pursuit of Prince Rosenberg, who was marching in that direction; and Marshal Davoust received an order to support me with his corps. I overthrew the troops in my front; and as they changed direction, abandoning the road into Moravia, by marching upon the Laa, to cross the Taya there, and to join the main body at Znaim, I did so likewise.

On the evening of the 9th, when I reached that river, I received a message from Marshal Davoust, who wrote to me from Wilfersdorf, that if I needed assistance, he was ready to join me. I had encountered but little resistance from the enemy, and nothing authorized me to think that succors were necessary; I therefore gave no invitation to Marshal Davoust.

Moreover, I thought that as no force had marched upon Nicolsburg, Davoust would abandon the design of directing himself upon that town. Everything happened differently from what I had been led to believe. Davoust marched to Nicolsburg, to supply his troops more easily; and I marched to Znaim, where I expected to encounter only a rear guard, and to be able to unite with Massena. But the enemy's retreat had been slower than I thought; two-thirds of his army were still on this side the river, with almost all their *materiel*, and one-third was immediately in my front. I took a defensive position to resist their efforts, and this position sufficiently near to Znaim acted also upon the retreat of the enemy's army, at the crossing of the bridge over the Taya. In spite of his repeated efforts, he could not dislodge me. I did not,

however, the less perceive the mistake I had made in not calling upon Davoust, and that which he had made in not coming spontaneously to my support. The retreat of the enemy would have been cut off; and the mass of his troops, obliged to retire by difficult cross roads, and to ascend the Taya, would probably have incurred the loss of a great portion of their *materiel*, and thus his disorganization would have been brought about. Such a success might have had incalculable consequences.

Succors deemed superfluous should not be summoned, but those which are offered should never be refused; for often a chance occasion gives them an unforeseen value.

CHAPTER VIII.

OF RETREATS.

It is not without justice that great praise has always been accorded to retreats made in presence of a superior enemy; this is one of the most delicate and hazardous operations of war.

The principal difficulty lies in the *morale* of the troops, which becomes much impaired in these circumstances; it is a singular thing,—the different impression produced upon the soldier, when he looks the enemy in the face, and when he turns his back upon him.

In the first case, he only sees what really exists; in the second, his imagination increases the danger. A general must then inspire his troops with pride and a just confidence, and present these sentiments to them as a powerful means of safety.

The soldier should be made to comprehend, that if he scorns the enemy, the enemy will respect him. In ordinary circumstances, when a general finds it necessary to retire at the approach of the hostile army, and nothing requires him to prolong his stay in the place he is going to leave, reason and prudence demand that he commence his movements before the enemy is in sight. By allowing an interval of two leagues at least, he gives to his march more comfort and facility. But there are circumstances

in which it is specially important to retard the enemy's march, to cause him to lose time by forcing him to make dispositions for attack, which suddenly become superfluous, because we withdraw at the moment when the battle seems ready to begin. Then are needed, at the same time, excellent troops, and great precautions on the part of the commander. It is in an arrangement by echelons, and great precision in the movements, that security is to be found.

If the retiring corps be so disproportioned to that which follows it, that it cannot hazard a battle, it may still, with prudence, sustain partial combats without danger. To this end it should prepare its movements beforehand, in such manner that there shall be no embarrassment among the troops, and that their march may always be light and easy. The general will place with his rear guard sufficient artillery, but not too much; it should be well served, well manœuvred, and some of the pieces should be of large calibre. This artillery, divided into two or three parts, placed in echelons, will march with facility, and will prepare successive and instantaneous points of resistance. The enemy is thus forced to halt in order to make his dispositions before attacking, and at the moment these dispositions are completed, the movement is resumed and the rear guard disappears. Then the enemy advances again; but he is kept at a distance by the fire of the artillery, which he soon discovers to be superior to his own; for the pursuing force lengthens out its columns, while the other, by retiring, constantly

carries away the field of battle, and draws nearer to its reserves.

Hence there is a continual alternation in the respective strength of the troops in contact.

On the 25th of February, 1814, I executed a movement of this kind successfully. I was operating upon the left bank of the Aube, and my corps was composed of about 6000 men of all arms. The Prussian army, commanded by Marshal Blücher,* and 45,000 strong, crossed the river at Plancy, and marched against me. I took position on the heights of Vindé, in rear of Sézanne. Appearances were such as to cause the enemy's general to believe that I had resolved to fight. He made complete dispositions to carry the position, and placed about thirty cannon in battery. That moment having come, all my forces broke up in good order, well together, and with celerity, and the enemy started in pursuit; but in the march, which lasted the whole day, things worked in such manner that he was always kept at a distance, and forced frequently to halt to reunite his forces when he had been

* Lebrecht von Blücher, Prince of Wahlstadt, Field Marshal of the King of Prussia, born 1742; major in 1793, and fought with distinction in numerous battles on the Rhine; major-general 1794; fought at Auerstädt, 1806; defeated the French marshal, Macdonald, at the Katzbach, 1813. In the same year repulsed Marmont at Möckern; was highly distinguished for his movements in France in 1814, here referred to; repulsed and beaten by Napoleon at Ligny in 1815, and arriving at a decisive moment at Waterloo, to the assistance of Wellington, insured the victory. His great energy and promptitude gained him the name of *Marshal Forwards*. Died 1819.

too rapid. I arrived at Ferté-Gaucher, all the time exchanging cannon shots, and took position behind Morin; I had lost no men, except those struck by the enemy's balls, and I had not left behind a single living man, nor a piece of artillery.

The morning after the battle of Brienne, I was charged by Napoleon to withdraw upon the Voire, to take position at first at Perthé, in order to attract the attention of the enemy as long as possible, and thus to make a diversion in favor of the mass of troops who were retiring upon the Aube, by the bridge of Lesmont. After having paraded my forces at daybreak, and prepared my retreat in such a manner as to secure it, I executed it without loss, under the guns of the enemy; I passed the defile of Rosnai, without disorder and as if on drill, before the army of the enemy, almost the whole of which was directed upon me; it was unable afterwards to cross the Voire, which it tried many times to do in vain.

If the retiring army is of sufficient strength to measure itself with the enemy, analogous dispositions are made. Its safety lies still in the manner in which the echelons are placed, and the aim is always the application of the fundamental principle established above — to be more numerous than the enemy, at the moment of combat, on the field of battle.

The best disposition in such a conjuncture is this:— to retreat with the army very early, leaving a strong rear guard, which should retreat as late as possible without compromising itself; to take position in a defensive place,

at such a distance that the enemy can only arrive three hours before sunset. However anxious to fight, he has not time to make his preparatory dispositions, and if he attempts the attack before completing them, he ought to be crushed, for the encamped army has all its forces united, while he necessarily has only a portion of his own.

It was thus that in 1812 the army of Portugal, very inferior to the English army, withdrew while in its sight, from the banks of the Tormes, to go and take position on the Duero, from which the enemy made no attempt to drive it.

In 1796, when General Moreau* evacuated Bavaria, to retreat upon the Rhine, followed by the Austrian army, he put this theory in practice; pressed too closely, and marching with his forces united, he halted, gave battle, and gained a victory.

But if an army in retreat, or even a single rear guard, finds upon its route an impregnable position, which the enemy cannot carry except by turning it at a distance,

* Jean Victor Moreau, born 1763; at first a lawyer; became a soldier at the outbreak of the Revolution, 1789; brigadier-general in 1793; general of division, 1794. His revolutionary sympathies received a severe shock by the execution of his father at Brest, by the Jacobins. Commander-in-chief of the army of the Rhine and Moselle in 1796, and defeats Wurmser; distinguished in Italy, 1799; commanded the northern army against Kray and the Archduke John in 1800, and won the battle of Hohenlinden. Opposed Napoleon and conspired against him in 1804; was exiled, and lived some time in New York; in 1812, accepted a position on the Emperor Alexander's staff, and was killed at Dresden in 1813.

they should always occupy it during the entire time they can remain without danger; if the enemy manœuvres to cause them to evacuate it, his operations are delayed, and time is everything for the defensive. If the enemy, in his impatience and ardor, attacking suddenly, rushes upon material obstacles, an easy victory will be gained, and one sometimes very destructive to the enemy, and susceptible of considerably changing the relations of the *morale* of the two armies.

This is what happened in Portugal, on the 27th of September, 1810. The English army, inferior to the French, took post on the 26th, upon the mountain of Busaco, counterfort of the Sierra of Accoba. The right of the position, which was impregnable, barred the road, while the left, connected with higher mountains, was of easy access. Massena, whom the Emperor had recommended to profit by his superiority to force the enemy to accept battle, resolved upon an immediate attack, and, unfortunately, without having sufficiently reconnoitred the position occupied by the enemy along his entire front. After unheard-of efforts, the corps of General Reignier succeeded in scaling the mountain under the enemy's fire, but, coming upon the plateau, and finding the whole English army drawn up, it was easily overthrown; it lost in a few minutes the ground it had painfully and courageously gained during an hour. Six thousand men were put *hors de combat*. The next morning, seeing a movement of the French army by its right, the English army disappeared. The result of this unfortunate combat

changed the *morale* of the two armies, and diminished on our side that blind confidence so necessary to success, while it re-inspired that of the enemy. Had this event not happened, an attack upon the lines of Lisbon would probably have been attempted, and had that succeeded, the success would have terminated the war in the Peninsula.

CHAPTER IX.

NIGHT ATTACKS AND SURPRISES.

No theory can be made concerning **surprises**. Surprises ought to be impossible of execution in the day-time, and would always be so if every commander and every soldier did their duty with exactness and intelligence; but sometimes things happen otherwise. When the enemy is surprised, it is a good fortune by which we should know how to profit; for nothing promises a prompt and easy success more fully than this.

Troops which are in the order of formation exacted by circumstances, troops which know that they are about to fight, which are animated by the sentiment of their strength, by confidence,—troops of this nature attacking a surprised enemy, in no way prepared to resist them, have such advantages over him that they have the right to count upon victory.

Very good troops, animated by an excellent spirit, commanded by a general skilful and prompt in his resolves, may sometimes escape a catastrophe under similar circumstances; but it is equally true that such troops and a general possessing these qualities will never so conduct themselves as to be placed in such a condition.

It is entirely otherwise with **night attacks**; there cannot be surprises, in the proper acceptation of the word;

but there are sudden attacks which nothing could have foreseen, and there may be ignorance of the true dispositions of the enemy, because one cannot be aware of his presence during the night, except at a very short distance, when armies are near each other.

It is only in the case of extreme proximity that I believe such an enterprise to be possible; for if it were necessary, before attacking, to pass over a great space, there would be many chances that the different columns, at the moment of action, would not be in harmony with each other.

It is then, I repeat, when two armies are very near to each other that such an action can be performed; but in this only a moderate force should be employed; the attack should be made upon many points at the same time; above all, the attempt should be made to throw the enemy into disorder; if we can do that, we obtain the results of a victory, without having purchased it by great sacrifices, and we are ready to profit by it, if, later, the condition of things offers us the opportunity.

It is principally against tolerable troops and weak discipline that we ought thus to act. If in the midst of the uncertainty of a true attack, such troops are put in motion, confusion soon springs up among them; sometimes it even happens that the different columns mistake and fire into each other, to the entire profit of the assailant, who is only a spectator; he who attacks, only employing a part of his troops, after having fortified them with precise instructions which determine the sphere

in which they are to operate, and having made them understand the ground and the direction of the other columns, runs a much less risk of falling into errors. We have more than once seen columns of the same army, operating at night, mistake each other respectively for the enemy, and do each other much injury.* If simple chance may produce such accidents, we may conceive it possible to contribute to their production, and then the accidents will be still graver, because the presence of the enemy is real, and his action may be joined to that of chance in a direct manner; it is therefore well, when circumstances are very favorable, sometimes to attempt night attacks; to employ in them at first a limited number of troops, who will seek to render themselves masters of certain important points, and to be in readiness to overwhelm the enemy with all available means, as soon as day shall have dawned, if we may thereby promise ourselves great advantage.

The finest example of an attack of this kind is the enterprise executed by the Austrian army against the Prussian army at Hochkirch, on the night of the 13th and 14th of October, 1758. The two armies were very near. Marshal Daun skilfully planned the attack, which General Laudon executed with great vigor. This enterprise was favored by the blind confidence of the great Frederick, who did not perceive the dangers by which he was

* Witness the affray in which the Austrian army was engaged at Karausebes in 1789, under Joseph II. The different columns, mistaking each other for the enemy, during the night, fired into each other, and put 6000 men *hors de combat*.

threatened. A sudden attack, in several columns, made the Austrians masters of the great battery of the Prussian camp. They fought with energy until ten o'clock in the morning, and then the Prussian army was forced to retreat; this it accomplished in good order, and without being pursued, after having lost almost all its artillery. To effect even this required just such good troops and the *prestige* of the name of the great captain who had thus been beaten.

But if the circumstances which permit an enterprise of this nature are rare and delicate, if they should be carefully meditated upon, there are others in which there should be no hesitation, and which, without disadvantage, even in case of failure of success, give, in the event of success, very important results.

If beaten troops, in retreat, inconsiderately take a position too near the pursuing enemy, in the evening, and without being protected by material obstacles, these naturally constitute very favorable circumstances; then a night attack, made with a few troops, and conducted with vigor and intelligence, would be very proper.

The evening of the battle of Vauchamps, I had the good fortune to apply this principle with great success.

On the 14th of February, 1814, after the bloody affray of the morning at Vauchamps, which cost the Prussian army 4000 prisoners, the enemy began to retreat; my corps pursued him with ardor, and I succeeded in surrounding his rear guard, composed of a Russian division, with my cavalry, increased by a reserve of that arm

which Napoleon had placed at my disposal. This Russian infantry bravely resisted the charges directed against it, and continued its march.

Arrived at Etoges, and night having come on, covered by the forest through which they had passed, they halted, and made arrangements for establishing themselves there. I had received orders from Napoleon to halt at Champ-Aubert, and take position; but I knew the ground well, having only left it the evening before; and knowing that the position of Etoges was as bad for the enemy as it was favorable for us, foreseeing, too, that as soon as the morning came I should be charged with covering the movement which the Emperor was going to make to bring together the corps which were manœuvring in the basin of the Seine, I thought it necessary to hasten and try a sudden attack upon this force, and not to wait until he should evacuate Etoges before replacing him there. I brought together eight hundred infantry; I formed them in columns upon the high road, placing only fifty men on the right and left in the woods, at a hundred paces distant, to flank them; and, marching with them, I put this troop in motion in the most perfect silence, forbidding them to fire a single musket shot, but gave them orders to precipitate themselves upon the enemy as soon as they should reach him. It is three-quarters of a league from Champ-Aubert to Etoges; in half an hour we had reached the enemy's advanced posts. The Russian troops, occupied with preparations for the night, had dispersed, and only had under arms the main guards and the posts of obser-

vation. One charge with the bayonet put these to flight; we precipitated ourselves upon the village; and, in one moment, after having received hardly five hundred musket shots, the entire infantry and artillery, comprising nearly four thousand men, were in our power, as well as Prince Urusoff, who commanded them.

After a decided reverse, and a precipitate retreat, even if executed in good order, we should separate ourselves so far from the enemy on the evening of the battle as to be secured against his attempts of this nature; and, after a decided success, we should not hesitate to undertake a night enterprise against a beaten enemy who places himself imprudently within reach of the blows of his conqueror.

I now come to consider those **surprises** the aim of which is to seize a **fortified place**: enterprises of this nature have been often repeated; some have succeeded, others have failed, and although it is difficult to recognize precisely the circumstances which have produced these various results, we may nevertheless indicate them, at least in part, by seeking for the conditions which should have caused their success.

When such operations can be executed, we should not hesitate to attempt them; their success sometimes suddenly changes the system and the character of the war, and procures advantages much greater than a battle won.

It is ordinarily by means of sources of information established with inhabitants of the place, that the operations are made. Sometimes the influence of money is

sufficient to seduce them; but when religious or political passions hold sway, there is often a chance of finding individuals with characters which pass for honorable, who are disposed to serve you. There are also enterprises executed by the sole concurrence of stratagem, boldness, and courage, which succeed, the plan of which has been based upon a knowledge of the weakness and negligence of a garrison. In the number of the latter, I will place the surprise of Prague by the French army in 1741, which has made the name of Chevert celebrated; and the taking of Fort Mahon in 1756.

The fundamental principle of success in a surprise, whether it be favored from within or not, is promptly to make ourselves masters of an entrance which opens upon the country. The number of troops introduced furtively or by escalade will always be small; it can never increase as rapidly as the troops who are collected for the defence, nor promptly enough to be formidable to a garrison arrayed in the defence: the principal aim, therefore, should be to cause powerful succors to arrive as quickly as possible. When this condition is not fulfilled, if the heads of both garrison and commander are not turned, such bold enterprises must always fail.

But we should be well persuaded that even with the most favorable elements it is still possible to fail, if the garrison, thus surprised, is animated by an excellent spirit, and if the soldiers are endowed with great energy, which keeps them from calculating, at the very first moment, both the disparity of force and the present danger,

while they only think of the defence, and not of saving themselves. Then every soldier fights just where he happens to be; the smallest gatherings are effectual everywhere,—at the door of a house, the corner of a street, behind a wagon; they thus unexpectedly derange the enemy's combinations, by arresting the march of his first troops; and this is the beginning of safety for the place. Its chances increase every minute: other troops form in the same manner as the first, and soon the garrison is set up again, relieved from that powerful moral effect which the unforeseen always causes; it reunites, acts in combination, and comes victorious out of the struggle in which it seemed at first bound to succumb.

In such circumstances, the first soldiers placed by chance in the presence of the enemy should have only one thought,—the safety of the whole, and the glory which always accompanies a great act of self-devotion.

Never was a sentiment of this nature more energetically expressed or more brilliantly displayed than at the surprise of Cremona, on the 1st of February, 1702. Never did a more glorious event give lustre to the character of the French soldier.

Cremona was occupied as the headquarters of the army, and had a garrison of 8000 men. The great extent of the works, the negligent manner in which they were guarded, the security which reigned there, and a habitual forgetfulness of military duties, all of which were observed, gave to Prince Eugene of Savoy the idea of gaining possession of it, by surprise, and of making the garrison

prisoners. The discovery of an abandoned old aqueduct favored the enterprise; a priest who was won over, associated with some of the inhabitants, prepared the scheme: four hundred disguised grenadiers are introduced, and kept concealed in a church; other troops penetrate through the aqueduct. A postern, which had been walled up, is demolished during the night; six thousand picked men, at whose head Prince Eugene marched—the first general of his age—seem to take possession of the town; at length the enemy reaches the great square, (*place d'armes*,) and occupies the principal communications before the garrison is even alarmed. At the cry, “the enemy is in the town!” every man awakes and flies to arms; the fight is waged at every point. Marshal Villeroi is taken, all the generals except two are killed, wounded or taken prisoners, and the direction of the defence is entirely abandoned to the instinct of the soldier; voices which seem providential resound in every direction; they indicate movements and combinations which must result in safety; and those troops, surprised in their beds, naked, and deprived of their officers, seeking vainly to join them, fight furiously in the midst of this chaos for twelve hours, without eating, without drinking, and without clothing—and that in the depth of winter. At length they drive out the enemy who had assailed them, after having caused him to run the imminent risk of being taken prisoner himself. And nevertheless this enemy, commanded by an illustrious captain, made only this slight mistake in his calculations:—meeting a battalion which was about to take arms to go to drill,

and the delay in the arrival of succors, four thousand strong, upon which he counted, and the special object of which was to cut off the escape of the garrison.

We can conceive nothing more sublime. If in a condition so extraordinary and so unfortunate, a garrison could find its safety in its energy, we may judge what ought to happen, when a garrison does not abandon itself at the first sight of danger, and attempts to resist a feeble detachment which has penetrated into the work by surprise, and when the disproportion of numbers is so great between those who attack and those who defend: the resistance of one hour decides the issue; it sweeps away the effects of surprise, in themselves so powerful. We then come into the domain of the real, a thousand times more formidable than that of the imagination.

In our own time an analogous event to that of which I have just spoken happened, to shed lustre upon our arms. It is less known, but it is well to recall it to memory, and to transmit the circumstances to posterity.

When, in 1814, the events of that war had moved us away from the banks of the Rhine, Holland was evacuated, and immediately became hostile to France. English troops, under the orders of General Graham, were soon debarked to support the public spirit, and to give strength to the revolution thus begun.

General Molitor, on leaving Holland, placed garrisons in the most important fortified towns; but the condition of our armies at that time did not allow the detachment of many troops, and they could probably only be composed

of depot battalions.* The garrison of Bergen-op-Zoom, on account of the importance and extent of the works, was put at 4000 men. Those of the conscripts who did not belong to the old limits of France having deserted, it was reduced to less than 3000, and it was with this weak body that the brilliant feat of arms now to be related was executed; a feat as glorious for this handful of brave men as for General Bizanet, who commanded them, because on the part of the commander, the wisest and most far-seeing measures had been taken in advance, and more energetic ones still succeeded these, when the moment of action arrived. Here it was different from Cremona, where salvation was due solely to the obstinate courage of the soldiers. At Bergen-op-Zoom, the soldiers were eminently brave also, resolute, energetic, but it was especially by their subordination to the laws of discipline, and by their exact fulfilment of the orders of their chief, that they triumphed over the enemy.

The insufficiency of the garrison had determined General Bizanet to concentrate all the troops in the town, and to evacuate the exterior works, in the midst of which his small command would have seemed lost. He counteracted the disadvantages arising from this measure, as it concerned observation of the enemy's movements, by numerous patrols; he doubled the interior posts, and established numerous night pickets, always ready to seize their arms.

General Graham, who commanded the English in Hol-

* Less fit than others to take the field, and left in garrison on that account.

land, and who was at a short distance from Bergen-op-Zoom, being informed of the small number of defenders, thought he could carry it by a sudden attack, (*coup de main.*) He relied also upon the aid of the inhabitants, and had secret communications with the interior. He detailed for this enterprise 4800 men, and he chose for the attempt the night of the 8th and 9th of March, the anniversary of the birth of the Prince of Orange.

The assailant divided his party into four columns, designed to make four simultaneous attacks: the first two were to scale the ramparts—one between the Antwerp gate and the harbor, the other between the Antwerp gate and the Breda gate; a third was to present itself at the Strenburg gate, to make a false attack; and the fourth was to enter the town by the harbor, taking advantage of the low tide.

At ten o'clock at night, the third column surprised the advanced post at the Strenburg gate, but its progress was entirely arrested by the fire of the troops placed in a stockade to defend the stationary bridge.

The garrison flew to arms.

At the same time, the fourth column entered by the harbor without having been perceived by the guard-boat, and penetrated into the city. But troops sent against it having succeeded in dividing it, one part was halted, while the other part reached the rampart, where it was followed.

The second column had succeeded in its escalade, and was marching upon the Antwerp gate, to throw it open

to General Graham, who was waiting on the glacis with the rest of his troops and his cavalry. But a strong, reinforcing picket, sent in hot haste by General Bizanet to the Antwerp gate, prevented the English from seizing it, and the first column, failing in its escalade, was repulsed with great loss.

There were in like manner engagements in different directions during the whole night.

At the break of day, General Bizanet attacking with the remainder of his force, threw the enemy back upon the water-gate, and brought him to a stand: not being able to retreat, crushed by the grape of the exterior works, the English columns were thus obliged to lay down their arms, with a loss of 1200 killed, 600 wounded, (of whom two were general officers,) 2177 prisoners, (among whom were one general and four colonels,) 4000 muskets, four flags, a quantity of munitions, etc.

General Graham begged a suspension of arms for three days, to bury the dead, take away the wounded, and receive prisoners returned on parole.

All eulogium is superfluous after the narrative of such an action.

French blood has been famous in every epoch; our morals give extraordinary *éclat* to military glory, and this appreciation of the value of the sacrifice of life, sacrifice which public opinion alone can worthily recompense, has contributed much to develop in France the virtues of devotion,—safeguard of the power of nations. The army will not change so long as our morals remain

the same. Heaven grant, for the destinies of the country, that it may always be so, and that those dry and calculating minds who see the guarantee of social happiness only in material interests, and whose fatal aberrations prove a complete ignorance of the human heart, shall never exercise in the councils of the country a power and a credit which would tend to its destruction.

I search my memory in vain for examples of surprises of fortresses executed successfully against French troops. I have, on the contrary, met those which have transpired among foreign troops, and I will cite two which happened to the Prussians in the seven years' war: that of Glatz in 1760, and that of Schweidnitz in 1761.

General Laudon had, before his approach, established a system for obtaining information with several officers of the garrison of the fortress of Glatz, by means of the monks who lived there. Scarcely had the Austrians arrived before the place, when they opened their trenches, and being informed at what time the officers who were devoted to them would be on guard in the advanced fort of the Grue, a fort cut out of the rock, and deemed impregnable, they directed a strong attack upon this point; the besieged fled, and the Austrians, who followed them with ardor, entered pell-mell with them into the fortress. Ready reserves followed the first troops, and the Austrians were in possession of the place without having encountered the least resistance.

As for Schweidnitz, it happened thus: Five hundred prisoners of war were there, and among them an Italian

major named de Roca, a partisan officer; this officer knew how to get into the good graces of the commander, and was permitted to walk freely about the fortress. He soon knew the position of the posts and the details of the service. He intrigued in the town, and set to work to corrupt those who might serve him. Upon his representations, General Laudon conceived the project of surprising the place, which he executed on the night of September 30 and October 1. He distributed twenty battalions in four attacks. The commander of Schweidnitz was at a ball; but upon certain alarming indications he had made the garrison take arms, without, however, sending any one outside to learn whether the enemy was near; so that the Austrians even reached the palisades without being discovered. They surprised the Stricganet gate; in the confusion the prisoners of war, having torn away the mask, took possession of the interior gate, and in less than one hour the town was taken, and the garrison were prisoners of war.

I will add two words concerning two surprises which were essayed in our days, but which did not succeed, solely because of the manner in which they were tried.

In 1796, when the French army was making ready to besiege Mantua, it was considered possible and very advantageous to carry, on the first night, the T work, by a surprise. This work, without revetment, covers a long curtain of the principal, which is only flanked by two large towers; it then constituted, and has still formed since the construction of the fort of Pictoli, which we built,

the best defence of Mantua on that side. The garrison was considered weak and exhausted by sickness; three hundred soldiers were dressed in the uniform of the garrison, and placed under the orders of an Italian officer, a deserter from the Austrian service, who was serving in our ranks; he was to feign a defence of the island in which the fort was situated, and to seem to be closely pressed by French troops, to throw himself upon the barrier of the covered way to seek protection there, to cause them to open to him, to seize that opening, and thus secure an entrance into the fort; but the officer of whom I have just spoken, who did not care to fall into the hands of the Austrians and be hung, was too gentle in the execution of his part, while Murat, who commanded the troops designed to aid him, acted slowly and with circumspection. The garrison, enlightened by this tardiness, were not duped by the comedy, which could only have succeeded through extraordinary activity and quickness.

The second was the enterprise made in 1800, on the Fort of Bard. Scarcely one hundred and fifty men composed the garrison. The assault which was made would infallibly have succeeded if it had been discreetly conducted. Colonel Dufour—a brave soldier, but entirely destitute of intelligence and incapable of reflection, charged with the command of the column which was to seize the gate—instead of approaching in silence, and noiselessly placing his ladders against the wall, which he should have scaled in a moment, bethought himself, like a fool, to have

the charge beaten before leaving the village. The garrison, warned, placed itself in defence; Dufour received a ball in the breast, and the attack was repulsed with considerable loss. It was this check which necessitated the bold enterprise of taking the artillery, by hand, under the same fort, during the night, in spite of the enemy's fire, and thus to pass the defile.*

* I have the right to claim for myself the merit of the conception and execution of that audacious enterprise, all the details of which I directed in person.

The First Consul only concurred in it, by authorizing me to try it; but justice imposes upon me the duty of associating with it the name of my chief of staff, then Lieutenant-Colonel de Sénarmont, an officer of great merit and valor, afterwards lieutenant-general, and killed before Cadiz. He contributed powerfully to success by the assistance he rendered me. This officer bore one of the finest artillery names, which his father had already rendered illustrious.—M.

CHAPTER X.

THE DEFENCE OF FORTIFIED PLACES.

THE first element of resistance in a fortress, is to have a good commander; add to this first indispensable condition, a garrison of sufficient strength and full supplies of every kind—provisions, munitions, etc.—and you will be able to obtain the most extraordinary results. The fortifications may be more or less perfect; but this perfection, always desirable, is a small matter, if its effects be compared with those produced by the courage and resolution of the chief who presides over the defence.

The commanding officer of a fortress is its soul; it lives in him and through him. If at the commencement of a siege a garrison is poor, it will soon become good under a good commander; he will be able to awaken in it sentiments of honor, of patriotism and of glory, which sometimes slumber in the hearts of soldiers.

It is very fine to win battles; the *éclat* which redounds to the commander dazzles; success brings enthusiasm and admiration; but it is finer still—more meritorious, at least—to defend a place during a period which passes the recognized limits of defence.

The glory of a battle won, however brilliant it may be for the general, is always shared; that of a commander of a fortress is almost entirely his own. This glory is his

work; it is the fruit, not of a unique action accomplished under determinate circumstances, but of a long and uninterrupted series of persevering efforts, ceaselessly renewed, with the same certainty of their inutility, if timely succors do not arrive; the efforts of each day are not rewarded by the prospect of the delights of victory; they are always, on the contrary, connected with a painful sense of relative weakness, and they have not, for aim, to triumph over the enemy, but only to delay his successes, without changing the results.

Every man of sentiment always has courage and energy for twenty-four hours; in success, every man seems a hero. But how rare it is to find the same courage, the same tenacity, the same ardor, in reverses! It is only the truly brave who then display these qualities, and it is easy to count them.

But the commander of a besieged fortress is surrounded by conditions much more difficult still. It is necessary not only that he should possess and preserve a moral courage such as Providence has rarely granted to man, but even that this courage should increase in proportion as circumstances, becoming more difficult, would naturally lessen it; for he must counterbalance in the garrison the effect of sufferings and want which fall to their lot. The commander alone seems interested in the defence, because he almost alone receives the glory of it, while those who are under his orders only have its hardships. Thus, moreover, when a commander is disposed to surrender, he always finds himself surrounded by approvers

of this policy, and by officers disposed to raise scruples and doubts which have also occurred to his own mind; and when he calls the votes of a council assembled to decide whether the time to capitulate has arrived, the affirmative is always proclaimed, and it sometimes happens that those who protest against the surrender, would not utter this advice if their votes could change the majority.

Nothing is worthier of admiration than the defence of a place carried to extreme limits; but nothing is rarer.

Justice then requires that the names of those who have acquired such glory should be rendered immortal.

The most splendid defence known in the history of modern wars is that of Grave, on the Meuse, by de Chamilly, in 1675; nothing can be compared with it. That town had received the depots of the army, at the time of the invasion of Louis XIV. in Holland, and contained great supplies. Its extent is of moderate size; it had a garrison of 5000 men; it was defended for five months of regular siege; it resisted all the efforts of the Prince of Orange, who lost 30,000 men there, and Chamilly only surrendered upon an order signed by the king, carrying away with him all his artillery to the arms of France.*

* I was always ambitious to be placed in charge of the defence of a great fortress, having an internal sentiment that this task would not be above my powers. If I had been, I should have caused the journal of the siege of Grave to be reprinted, that every officer, non-commissioned officer and soldier might have had a model in his hands. If regiments are some day provided with libraries, it would be useful to place this work in them, worthy as it is of a soldier's greatest interest.—M.

After this admirable defence, we should place in the first rank that of Lille, and its citadel, in 1708. Marshal Boufflers, who commanded there, won immortal glory.

In our days sieges have been rare; we cannot, however, pass in silence the defence of the works of San Sebastian, commanded by General Rey, a long and obstinate defence which caused great losses to the English army.

The defence of the Fort of Burgos, under the orders of General Dubreton, which, attacked less powerfully, was still not without glory; and that of Wittemberg on the Elbe, by General La Poype.

But to set against a few extraordinary resistances which we most admire, how many moderate defences are there, judged with unmerited indulgence; how many culpable surrenders which remained unpunished!

The preservation of a fortress is so important and essential; it influences sometimes so powerfully the safety of an army and a country, that its surrender should always be an object of a legal investigation, which would force a clear statement of the circumstances accompanying the defence and leading to the capitulation. Then, the commander should be punished, or else rewarded and covered with unstinted praise.

The regulations for the navy prescribe the trial of every captain who has lost his vessel, in whatever manner the event may have happened. If he has done his duty, he is acquitted and honorably restored to service.

We understand this indulgence and this reservation in

the legislation, because circumstances of superior force may occur upon so movable an element as the sea, and be powerful enough to rule and master science, vigilance and courage. But on land nothing is variable; when surrender is not caused by the failure of supplies, there can be no legitimate excuse; we can only choose between praise and blame. Military regulations should be rigorously executed, and when a commander surrenders before there is a practical breach in the body of the place, and before having sustained at least one assault, there is crime on his part, and consequently there should be punishment.

I shall not enter into the technical details of the attack and defence of fortresses. Special works have treated of these matters in a complete manner. I shall content myself with a few reflections on the general direction to be followed in a defence.

In great fortresses it is too much the habit to make sorties at a distance before the beginning of the siege, and to exhaust a part of the means, forces and confidence, which are so useful and which it is so important to preserve until the moment when courage and valor shall be still more necessary. By going out to a distance from the fortification we lose our point of support; we are deprived of those succors which establish a sort of equilibrium between the garrison and the attacking army. I should advise, then, that in every case, unless there be a hope of thereby raising the siege, a sortie made with a large portion of the garrison should never go to such a distance

from the works as to be deprived of the efficient aid of the cannons of the fortress.

But if sorties of this kind should be prohibited, those having for their object the destruction of the enemy's works, as soon as commenced, cannot be too frequent, their chief aim being to arrest the enemy's movements and to gain time; this will be best achieved by giving him frequent alarms, and by often forcing sharp but short combats upon him, which require him to recommence the same works many times. In proportion as the enemy approaches the place, and the siege progresses, sorties made with smaller numbers—the field of battle becoming more and more restricted—should be still more frequent. In fine, it is at the moment when the close proximity of the enemy so often presents to commanders the idea of surrender, that the real defence should begin; and it even seems that it should never end, if every day new obstacles are prepared, if interior entrenchments are opportunely constructed; such dispositions should be made that the besieged should never be completely deprived of the fire of artillery, but should always preserve a few guns, well covered, for defending the breach. This precaution alone, which should be a matter of special concern, may control the destiny of the place for many days, and add very much to the glory of its defence.

I will close this chapter with an observation by which the commandants of besieged fortresses should profit. It is always against surprises that they should guard themselves; for the more improbable a thing, the greater the

effect it produces when it does occur. A brave garrison defends a breach, and the enemy cannot for a long time overcome its resistance; but if, at a moment when the attention of all is directed upon the defence of an open and assailed point, it is discovered that the enemy has entered the place at another point by escalade, then the mind becomes confused, the defence of the breach is abandoned, and the place taken.

Never, then, should the most exact watchfulness upon every point be relaxed; particularly should the eye be kept upon those points which seem the least easy to be attacked; for the enemy will choose them in preference, because seemingly able to defend themselves they will not be placed in charge of any force.

In 1741, the fortifications of Prague were the object of tumultuous night demonstrations, on the part of the French army, upon two points, and these demonstrations attracted the whole garrison; but other troops directed their march in silence upon a point in the body of the works enclosing the new town, which was at some distance; they carried with them a single ladder, crossed over the rampart, finding no one, opened the nearest gate, and the town was taken almost without a struggle with the garrison.

In our own days, in 1812, at Rodrigo, the garrison bravely defends a practicable breach made in the body of the place, and repulses the enemy; but fifty English soldiers escalade with ladders the castle, a dominant point, the scarp of which is revetted, and of great height; they

spread the alarm, give rise to disorder, and are masters of the town.

So likewise at Badajos. That city, besieged in the same year, is provided with a good garrison, commanded by a distinguished general, General Philippon, who had already sustained a glorious siege the year before. Entrenched against the breach, he there repels the assaults of the enemy; but the castle, the walls of which are eighty feet high, is escaladed by fifty men; alarm and disorder are spread around, and the city is taken.

Never under any pretext should this general oversight be relaxed; but there should be disposed, even in the places which seem most guarded against attack, some means of resistance, especially when a siege is begun, and when the enemy may and must suppose that all the means of defence have been concentrated upon the point to which he is directing his attacks.*

* I have not indicated in the number of remarkable defences that of Saragossa, by the Spaniards, because it is connected with a different order of events. An immense population, refugees of the province, with vast supplies, a population rendered fanatical by religion and patriotism, constantly more than double the number of the besieging force, and whose daily losses were almost imperceptible, by occupying those immense and indestructible convents, which are real fortresses, could and did arrest for a long time our efforts. But similar circumstances can hardly be renewed; that defence cannot furnish instruction which can be useful in regular warfare. As to the siege of Genoa, it was a splendid and grand operation of war, but the defence of an entrenched camp, not of a fortress properly so called.—M.

PART IV.

THE PHILOSOPHY OF WAR.

CHAPTER I.

THE MORALS OF SOLDIERS AND THE MANNER OF FORMING THEM; ARMIES IN FORMER TIMES AND ARMIES AT THE PRESENT DAY.

THREE things are necessary to give value to troops: the love of order, the habit of obedience, and confidence in themselves and in others. Such are, in their moral relations, the fundamental basis of an army. Without this basis, an assemblage of men has no consistence, justifies no hope, satisfies no want.

We should then in no degree neglect to develop these three elements in the minds and hearts of soldiers, to introduce into the morals of men of war those habitudes which I will call **military virtues**.

Discipline—that is, submission to rules and to the will of the lawful commander—must be unrelaxingly observed;

and each one, in whatever grade he may be placed, should always remember that he commands his subordinates only by the title of the obedience which he renders to his superiors.

Discipline, always severe for a grave dereliction, should, however, be measured in its applications.

In countries where elevation of sentiment, delicacy of manners, and dignity of character have banished corporal punishments, it is necessary, as far as possible, to introduce opinion into the punishments.

The French army particularly has always offered to an intelligent commander frequent occasions of utilizing this resource. Praise and blame, properly applied, the talent to excite a useful and noble emulation, have often been sufficient for all needs. Punishments and rewards, based upon opinion, have this marvellous characteristic,—that they are susceptible of infinite shades, and act powerfully upon generous hearts. Never should a punishment, whatever it may be—except for an act of flagrant baseness—be inflicted with an expression of contempt. Everything that degrades the soldier and brands him, diminishes his value, as everything which exalts him in his own eyes adds to his powers. There are a thousand means of varying the expression of these sentiments; a skilful chief chooses with discernment the means which best suit the kind of men he has in hand, and the circumstances in which they are placed.

In some armies severity is carried to excess in treating those faults which, to the eye of reason, seem trifling.

Without venturing to blame, I cannot approve the importance thus attached to them. Relating to certain details of dress, or to a momentary lack of steadiness under arms, too grave a punishment is unreasonable; but moderately inflicted, and looked upon in their relation to morals, the punishment has a good effect. The spirit of order, respect for regulations, are everywhere displayed; and it is as education, as a habit of life, that they should be regarded. A soldier in a soiled coat will doubtless fight as well as another whose uniform is perfectly correct; but, less exact in fulfilling his daily duties, he will probably be less obedient to the voice of his commander.

The life of an army is so astonishing, so artificial, that we cannot neglect, without danger, anything which contributes to give to its morals habits of order and of submission. But the commander must see the true aim, without exaggerating the importance of the means.

It is necessary that officers and commanders concern themselves, with particular care, to inspire confidence in their soldiers. Without this close bond, they can count upon nothing. In rest, in a state of peace, regulated power is easily respected and obeyed; but in the perturbations which dangers cause, everything becomes complicated, and the least natural obstacle may become insurmountable. It is then that self-confidence, and trust in others, those powerful internal voices, bestow an extraordinary energy which insures success.

The commander must then provide for the welfare of the soldier, must be willing, on important occasions, to share his

sufferings and privations; watch over the maintenance of order and discipline; punish when necessary, and eagerly seize opportunities of bestowing rewards—just rewards; for confidence in the justice of the commander is the basis of his credit and of the sentiments with which he is regarded. The instinct of the man is skilful to discover when a commander is worthy. Severity, then, has nothing which frightens or wounds, for it supposes force; and force, when it is the sincere interpreter of the laws, insures an efficient protection of rights. Even those who are the subjects of its action feel, at the bottom of their hearts, its utility and respectability.

As much as the maintenance of order should be, to commanders of every grade, a constant and ever-present thought, in just the same proportion should love for the soldiers be profoundly graven upon their hearts. I have already said this: how can they do otherwise than love that class of men, so deserving, so hardly treated in their entire condition, so habituated to privations, whose life is composed of so many sacrifices, who pass the best years of it in the midst of painful labors, dangers unceasingly renewed, and who so sincerely attach themselves to their commander, when they are loved by him! The soldier is good, by his very nature. If his education does not give him the right to be placed in the first rank of society, he would merit it by the sentiments which animate him. Habitual submission to regulations render him more moral still. A life of danger develops the noble instincts of his heart, and induces a constant devo-

tion, a sentiment inspired by Heaven itself. On his return to his fireside, the soldier is almost always a model to that portion of society in which he is called to live. I have seen him, in the midst of disorders and atrocities which war sometimes engenders, distinguish himself by acts of holy piety, of evangelical charity.* Shame and confusion to all who do not honor him, or who do not concur in every effort to ameliorate and soften his existence.

Another duty, which should never be neglected, is that of keeping soldiers in constant activity. Activity should be a second nature to them. Like almost all men, they are disposed to be lazy; it renders them the greatest service to change this disposition. Rest and idleness diminish their strength and lessen their courage. Health, energy and moral valor spring generally from a life hardened by fatigue and spent in movement.

Military drills are the first elements of that activity which I would enjoin; but they are not the only elements. In the first place, a soldier should acquire the most complete instruction; when he has that, to occupy him with

* I could cite many of these traits; I will only mention one. During the campaign in Egypt, a village revolted; a military execution was necessary as an example. The village was burned, and nearly all the inhabitants put to the sword.

A soldier, who doubtless had done his part in this cruel work, was struck with the sight of an infant who was stretching out its arms to him. He put it on his knapsack, took a goat to nourish it, carried the child for eight days, dragging the goat along, until he could find an Arab woman, who adopted the infant.—M.

the details of what he already knows, is an infallible means of producing in him an antipathy to his profession.

Great manœuvres, presenting a splendid spectacle, are the only things constantly to his taste; but new interests may be created for him, by exciting emulation in sports of different kinds. He may also be employed in important public works; and as a reward, the history of the regiments thus employed may be associated with the works they have executed by giving to these works their name. It is thus that splendid and great things might be accomplished economically, at the same time that there would be developed among the soldiers ideas of immortal glory and greatness, which cannot be too much fostered among men of war.

In the course of my military life, I have never permitted an opportunity to escape of applying this principle; and I have had cause of self-gratulation, not only as it concerned the immediate effect, but also in its influence upon the health and spirit of the troops. But I was careful not to pass certain limits, and in nowise to compromise a military spirit, the preservation and development of which should never cease to be the aim of every effort of a commander. Egypt, Holland, Dalmatia still present to our view those monuments of our past greatness, and of the then existing morals. In the latter country, eighty leagues of splendid roads, constructed in the wildest localities, in the midst of the greatest natural difficulties, have left to the inhabitants honorable remem-

brances which will be imperishable. Inscriptions cut upon the rocks yet announce to travellers that these works were executed by certain regiments and certain colonels. And when these brave soldiers, whose memory is so dear to me, laid down their picks and shovels to resume their arms, with what brilliancy did they display themselves on the battle-field! What strength, what energy did they not bring to bear upon the longest marches and the greatest fatigues!

Among the complementary means for the formation of troops, I will place in the first rank the establishment of great camps of instruction. These alone, during peace, can give to troops the habits and instruction which they need. Military spirit is only developed in the midst of the dangers of war, and such union of troops as present its image. Life in camp, the movements incident to it, the mingling of arms, that peculiar life from which civil society is so far removed, and which is the prime element of success and of glory, can only be created by assemblages of troops of some permanence and surrounded by comforts. I am not speaking of those temporary assemblages which are sometimes seen in different countries, the object of which is rather to present a spectacle than to give instruction and to develop the faculties; but of those camps of my youth, out of which sprang the finest and best army which has existed in modern times, and which, if it be equalled, certainly can never be surpassed: I speak of the army which encamped for two years on the

shores of the English Channel and the North Sea, and which fought at Ulm and Austerlitz.*

Supported by this example, and convinced by my own reflections, I would suggest that permanent establishments be formed in provinces which have but poor agricultural resources, like Champagne; and that durable barracks be arranged to receive 30,000 men.† The same troops should occupy them for three months at least. Three such establishments would suffice to give and preserve to the French army a military spirit and an instruction which would keep it constantly ready for war. But there is just now a vaster field for such exercises,—Algeria, which, if it makes us pay dear for its benefits, endows the army most richly in the matter of which I have spoken.

I cannot close this chapter without entering into some details as to the manner in which regular armies are formed in Europe; it is curious to see in what respects the armies of former times differ in their composition from those of the present day: the consequences drawn from this comparison will themselves offer food for reflection.

After the invasion of the barbarians, and the destruction of the Roman power, all special military organizations had disappeared in Europe. For many centuries,

* This was the camp of Zeist, already referred to by the author with great affection and eulogium.

† These ideas seem to be carried out in the entrenched camp at Chalons, prepared by Louis Napoleon; and in the English camp at Aldershot.

armies had no other basis than that of the feudal constitution. When experience had demonstrated the weakness of these temporary reunions of men, assembled in haste and without rule, which were suddenly dissolved, whether by the caprice of the great lords or by the exigence of their wants, and which thus rendered impossible every operation based upon calculation, the problem undertaken was to create regular and permanent means of power.

The sovereigns, however invested with the *right*, were without effective power over their vassals. To free themselves from this dependence, as soon as their finances permitted, they wished to have their own troops; and such was the origin of independent companies, (*compagnies d'ordonnance.*)

But regular revenues were necessary constantly to maintain troops under arms; and, on the other hand, regular revenues are not obtained without order and a certain administrative organization; the creation of armies was then at once the cause and the means of a commencement of civilization.

Nevertheless, the feudal system, placing the people in the hands of the lords, the latter were far from favoring the establishment of troops destined to overthrow their power; the sovereigns, being only able to dispose of their private domains, very limited, were reduced to regular enlistments, made for stated sums of money.

The disorders which existed throughout Europe, the constant wars which were waged, the multitude of petty sovereigns, rendered the people miserably poor, and pre-

sented to them the trade of the soldier as a resource. The morals of the age moreover allowed each one unlimited hopes of ambition.

A soldier might aspire to everything; and his combinations had no other element than his personal interests. The motive was not then as now the single thought to perform his duty towards his sovereign, to defend his country and to win glory,—that reward of public estimation so precious in our day. Soldier or captain, each one craved riches, and often raised his aspirations as high as a sovereignty. The Visconti, the Sforzas, the Scaligeri, the Ezzelini, and many others, had no other origin, and, before them, kingdoms had been the prey of certain Norman adventurers. Sovereigns, to facilitate the execution of their plans, were all obliged to employ, as intermediaries, warriors of reputation and credit, who, devoted to that profession from boyhood, were acquainted with many men capable of seconding them, and ready to share their fortunes.

Each one of these, in his sphere, had his roll of clients, and they united in furnishing regiments for any given enterprise.

Ferdinand II. (of Germany) sent for Wallenstein, and asked him for an army.* Conditions were discussed, and

* This was in 1624–5, just after the opening of the “thirty years” war. Wallenstein’s terms, which were accepted, were that he would raise and support an army of 50,000 men at his own expense, if he should have unlimited command of them, and be allowed to indemnify himself from the conquered lands. Nothing could more forcibly illustrate the barbarities of war in that epoch.

the treaty concluded. Wallenstein sent for officers in whom he had confidence, and negotiated with them for regiments, associating them in his benefices. These latter enlisted captains, who took upon themselves the charge of forming companies and of finding soldiers; and the army was created. It is just as in our day a monarch negotiates a loan with a rich banker, who distributes the greater part of it among his correspondents, associating them in the profits which he counts upon making; and these, in turn, seek for the money they need in the purses of private individuals.

It is understood that such an organization made the regiment the property of the colonel who had formed it.

Hence the names which they have received and have preserved in Austria, where, although they have become the regiments of the monarch, as in all other countries, they have nevertheless maintained, in some sort, their primitive physiognomy, and preserved their own constitutions and privileges. Moreover, the system followed there, which has put the institutions in harmony with state interests and present customs, offers, at the same time, a noble and splendid reward to generals whose lives have been rendered honorable by glorious services, and guarantees to the sovereign the proper choice of officers and the good spirit in the corps.

This is a fitting place to remark the immense difference presented in the composition of armies at the present day and in the preceding centuries. Our armies are formed by conscription; it is so in all the continental states, but not

in England, where special circumstances explain the maintenance of a system existing nowhere else. Armies in our day are of too great numerical strength for voluntary enlistments to supply their needs; moreover, there are not enough men to whom military service is a resource necessary to their livelihood; public order, which everywhere reigns for the good of humanity, greatly diminishes this number. Finally, the chances of good fortune in this career are too limited to lead men of some station to choose it. Other openings are provided, by the development of industry, to ardor and intelligence, and fortune presents herself in these without danger. Forced enlistments are then the only means of providing for the defence of the state; and a tax of blood has become everywhere one of the public claims.

The spirit of armies has been greatly modified by this; but it is by no means lost, notwithstanding appearances. Voluntary enlistment, with a terribly rigorous discipline, has sometimes made, as in England, good troops; but can we compare, for intelligence and morality, an army composed of young men of family, brought up in a spirit of order and obedience to laws, to one which, containing perhaps a few individuals animated by the love of war and of glory, is composed, in great proportion, of vagabonds, who are driven, by their bad morals, from a quiet and industrious life?

How much better are the public interests secured, when they are confided to those who look upon the military service as a noble and important duty! The young man

upon whom the lot falls, pacific in his manners, may leave his family with regret, even with grief; but the warlike spirit so natural to man, and particularly to the French, soon inspires him; then he cherishes noble thoughts; he becomes greater in his own eyes; he is faithful, he is devoted, and he finds in the good opinion of his commander and of his companions the reward of his sacrifices, his labors and his dangers. Such, at the present day, is the European soldier; for the system is everywhere uniform.

It may still be necessary to determine which is to be preferred of the two following systems: whether to place recruits from the same locality in the same regiments, or to distribute them into different corps. The first plan is adopted in Austria, Prussia and Germany; the second in France and Russia. Each has its advantages and disadvantages; but my judgment is in favor of the first system.

To begin with the disadvantages, this system gives to the soldiers a local and provincial spirit which, after the numerous revolutions we have experienced, would not be without danger, if such circumstances could be foreseen. Perhaps also it lessens, in time of peace, the military spirit, and tends to form an assemblage of peasants rather than of soldiers; but these disadvantages are easily remedied, if the reunions are multiplied, and the duration of camps of instruction prolonged.

As to the advantages, they are great and incontestible. As regards the administration, the enlistment is easier; the officers of the corps have the means of keeping an

eye on the men who are on leave; the transition from a peace footing to a war footing is marvellously simplified. As it concerns the *morale*, there is an increase—and the effect is important—of those sentiments of honor which render all the soldiers pensionaries of the glory of their regiments, by giving them in addition the task of defending the reputation of the province in which they were born. It is an additional motive, a new encouragement.

Besides, a distinguished soldier is rewarded for his good conduct, by the consideration he enjoys in his corps; now the system followed in France deprives him of this advantage, when he retires from service. Returned home, he is no longer known; he loses the greatest reward of his life, the good renown which he has acquired. It would follow him to his fireside, if he found there the companions of his youth; he would remain surrounded, until his death, by the glory (*auréole*) which he might have deserved and obtained.*

* The council of war, in 1828, considered this question. General d'Ambrugeac, one of the most distinguished officers of the army, reporter of the infantry committee, had presented a mixed system, which, by creating an excellent reserve, solved the question in a perfectly satisfactory manner. By a strange fatality, few of the works of this council, in which military questions were debated and deliberated upon with care, received a practical solution.—M.

CHAPTER II.

MILITARY SPIRIT, AND THE DIFFICULTIES OF COMMAND.

THE assemblage of 100,000 men, in the same place, far from their families, from their property, from their interests; their docility, their obedience, their ease of combined movement, (*mobilité*,) and their preservation; in short, the spirit which animates them, and—at a signal given by one man only—impels them to precipitate themselves with pleasure into imminent danger, where many of them will find death;—all these surely constitute one of the most extraordinary spectacles which can be presented by men in society; a phenomenon the cause and principle of which are to be found in the mysteries of the human heart.

It belongs to our nature to seek for and to love the emotional; the idea of danger is pleasing, although at the most threatening moment, there are few men not disconcerted by it. But we need to compare ourselves with others; emulation is natural to us; every one aims to think himself, and to see himself, superior to his fellows. Such is the motive by virtue of which the instinct of self-preservation gives place to noble bursts of courage.

The sphere of activity in which self-love acts depends upon the situation of the individual. Every one wishes to be seen and admired. The man placed in a crowd

sees his horizon in what immediately surrounds him; in a more elevated situation, this horizon widens; when we have reached the summit, the world opens to our contemplation.

This sentiment, so honorable to man, inspires the most generous actions. It is the motive alike of the private soldier and of the general. Thus, in all its grades, the profession of arms is noble, because, for all alike, it is composed of sacrifices, and is rewarded, before all, by public estimation and by glory. To speak disdainfully of those who compose the rank and file of armies, is a kind of blasphemy; even to speak of them with indifference is to misconceive the very conditions of our nature.

The elevated sentiment which I have just described is compatible with another very noble sentiment—that of friendship.

Community of danger, of glory, of interest, establishes the closest and sincerest ties; and as everything has its points of contact and its connections in the great mystery of society, it is precisely in a state of war, and in the midst of dangers—where society has most need of them—that we find most habitually displayed friendship, or the habit of companionship, (*camaraderie*,) and that *esprit de corps* to which opinion has imparted so much strength.

The exchange of services rendered, reciprocal assistance received and given, doubles—indeed increases tenfold—the strength and security of each individual. Thus opinion produces, develops and exalts the virtues among men in proportion as circumstances render their practice more necessary to secure their preservation.

But the heart of man is easily swayed, and the best sentiments are combated by others, which spring from the same principle considered in a different light. I brave a danger to save a comrade, because I count upon him in a similar emergency; but let the immediate danger seem to me too pressing; let fear rise superior to the interest which draws me to the succor of the individual menaced, and the instinct of self-preservation presents itself to my eyes when viewed in the light of present peril; I hurry away from the danger, forgetting all the motives which should have impelled me to brave it. The sentiment which has then overpowered me, which is called fear, is not uncommon in the presence of real danger; it is even much more common, and exercises a greater influence than is supposed, upon a great number of persons.* It is exactly to combat this and to nourish the opposite sentiments, that the power of discipline has been called to the aid of authority; and as example greatly influences the conduct of men; as the pre-eminently brave often carry others along with them, we cannot too richly reward, in every way, those who rise superior to common rules, in

* From no one could such an acknowledgment of human frailty come, with greater warrant of truth, than from the valiant and sometimes rash marshal.

Not to speak of numerous striking instances of Marmont's valor, the defence of Schœnfeld, in the great battle of Leipsic, may be cited as a particular example; that suburb was carried by the Russians five times, and as often retaken by Marmont; his aide was killed at his side, and when, with overwhelming numbers, the Russians finally occupied it, they left 4000 men upon the field, as proof of the tenacity of the defence.

order to increase their generous dispositions; for upon such the fate of battles often depends.

Bravery, in the armies of Europe at the present day, and particularly among officers, may be thus classified:—

The courage which keeps one from dishonoring himself, which causes him to perform his duties rigorously;—this is not rare.

That which impels a man to exceed his duty;—this is much less common.

That, finally, which decides a man unhesitatingly to make his life subordinate to the success to which he is to contribute;—this is the rarest possible. Therefore, when such valor is displayed, honors, wealth and consideration should be its reward; and the opportunity for conferring these rewards, thus limited, is so infrequent, that the expense would never be burdensome to any state.

The sentiments of which I have just spoken are not the only ones which ought to find place in the hearts of soldiers. It is necessary, in order to give to troops their entire value, that confidence should exist among all those who compose an army. The soldier must believe in the valor of his comrade. He will be convinced that his officer, equally brave, is his superior in experience and knowledge; he will take for granted in his general the same valor, and still more science and talent: thus the army forms a bundle of rods which nothing can break. This is the first condition of the strength of armies, the first element of success.

But this fundamental base which we call **confidence** is

only possible among tried and veteran troops, and not among new troops who do not know each other. Hence the absurdity of the system of a national guard, designed to take the place of regular troops. The national guards, supposing them to be composed of everything that there is bravest on earth, will never be worth anything at the beginning; for, as the valor and capacity of each cannot be appreciated by the others until they have experience of each other, the first attempts will be made without the aid of mutual confidence, and will probably lead to great and irreparable misfortunes.

The entire *morale* of war, for the general, consists in knowing the motions of the spirit which animates soldiers; in the rectitude of the judgments he forms, and of the application he makes of them, in the varied chances of war, as well of his own troops as of those which he has fought and is going to fight. These constitute an independent faculty in the profession of arms; nothing less than an appanage of genius. All great generals have possessed it, and never did any man in the world have it in a higher degree than Napoleon.

Discipline, the auxiliary of courage, is necessary also as a means of order. We may perceive its entire importance by reflecting upon the mechanism of an army, and by asking ourselves how such a multitude can subsist in motion as at rest.

It is not sufficient to assemble men in greater or less numbers to constitute an army. They must then be organized. I have elsewhere explained by what mechanism

obedience is assured, by placing the commander, in the different military grades, in concert with a limited number of men, upon whom he can easily exercise his powers.

This division once made, and this organization established, discipline must be arranged; that is, the subordinates must be habituated to a passive deference towards their superiors.

Then we arrive at instruction.

Thus three operations are necessary to convert a mass of men assembled together into an army:—

1. To **organize**; 2. To **discipline**; 3. To **instruct**. And the complement of the organization, discipline and instruction, is **confidence**—an essential element—the absence of which deprives an army of a great part of its value. This confidence should extend to all and each: confidence of soldiers, among themselves, in their reciprocal relations; confidence of each officer and soldier in their higher commanders; and especially in the commander-in-chief.

This important element, which acts so powerfully upon results, produces the greater effect in proportion as the soldiers are more intelligent; for confidence founded upon a knowledge of men and things is not an unreflecting sentiment, a blind faith.

Soldiers without intelligence have little mobility, and vary less than others who are livelier and more able to reason. The former are more easily commanded, and there is less disadvantage in giving them generals of limited capacity. The others, on the contrary, will have

more or less value according as the general is more or less worthy to command them.

In speaking of these two kinds of soldiers, I have especially in view the Germans and the French. The Germans have often achieved successes with leaders of very moderate ability; the French are worth ten times as much with a commander whom they esteem and love.

They sink beneath all comparison when commanded by a general who inspires neither their esteem nor confidence. They proved this at Hochstadt, (Blenheim,) in 1704; before Turin, in 1706; and in 1813, at Vittoria. The reason is simple. Men do not go to war to be killed! They always go to conquer the enemy; and if they run the chance of dying, it is on the condition that the supposed sacrifice of life to which they submit will be useful. Let the moment come when an intelligent mass has before it no probability of victory, no chance of a glorious combat; from that moment they hesitate to compromise their lives, and seek to preserve them for an occasion when they shall be able to accomplish the sacrifice more usefully.

I have sought to explain the different emotions which succeed each other in the hearts of soldiers; movements whence result phenomena apparently contradictory to the eyes of the ignorant, who, looking upon men as passive machines, do not comprehend the variations of which they are susceptible. I shall now touch upon the question of command, and shall endeavor to establish the qualities which it renders necessary.

The art of war is composed of two distinct parts: the profession properly so called, and the moral part, the appanage of genius. I have already expressed my opinions concerning the moral of war; I shall only add one word as to the qualities which confer upon a commander authority over those who surround him.

There is, in the first place, in certain individuals the faculty of acting upon the minds of others, a natural authority which demands an easy obedience. This authority is a special gift, and springs from causes hidden and above our comprehension. One, who was a subordinate yesterday and is to-day a commander, handles his power, at the moment he is invested with it, with as much facility as if he had always been clothed with it. Another—and the example is not uncommon—exercises an authority over his equals which they do not contest, although it rests upon no right, and although he is not gifted with a superior mind; this is a faculty belonging to his individual organization. The lawfully-appointed chief who possesses this power, inspires a salutary fear. He is considered severe, and the severity which he is supposed to feel really dispenses with its exercise. A look, a word, acts upon minds with irresistible ascendancy. Such men are designed by Providence to command others.

But as this powerful and natural action over one's fellows is rarely met with, obedience has been insured by accustoming subordinates to respect and reverence their commanders. Grades have been established to determine the rights of command, and to place in proper social rela-

tions, distinct and constant, those who are invested with them. To the higher grades public honors have been decreed, in order to strike the minds of others, and speak to their imaginations. In a word, nothing has been neglected to increase, in public opinion, the greatness of the depositaries of power, to the end that obedience may be better assured; an easy task in ordinary times, and when nothing opposes the preservation of good order, but difficult in moments of danger, suffering and passion. When the general has a reputation for courage and capacity, which calls for esteem and gives birth to confidence, his power is augmented; when to this he unites a great and noble family name, and his social position is very elevated, he is still greater in the eyes of the multitude. The more the depositary of authority possesses power and credit, the more we recognize in him the ability to distribute rewards, and the more easily is he obeyed.

All these means, united in the person of Napoleon, greatly favored his successes. They compose, if I may so express myself, the necessary conditions of command. But what are the personal faculties which command requires?*

* I have here established the conditions which are most favorable to command; and it results from them that when the general is at the same time the sovereign, everything conspires to aid him. Absolute freedom in his projects, in his movements and in his operations; the accumulation of means and of resources; the absence of responsibility; the power to experiment with hazardous combinations, which, with great chances against them, promise also great advantages; the certainty of being always obeyed whatever may happen, and zealously served, etc. etc. Differing from a situ-

The art of war, considered as to what constitutes the profession, is entirely combination and calculation. In this view of the subject, I entered into circumstantial details when treating of strategy and tactics. But in

ation so advantageous, a simple general has never at his control more than limited means. Whatever be his powers, he can only exercise them within certain limits. It is not sufficient that he should do well, but he must hold himself in readiness beforehand to justify his enterprises. In a word, the obedience due him may be rendered doubtful; and rivalries, hatred, intrigues, may become powerful auxiliaries to the enemy against whom he is fighting.

These two situations are not to be compared; and the merit of the general who is successful far surpasses that of the sovereign. Thus the glory of Napoleon in Germany does not nearly equal that of General Bonaparte in Italy. In the first campaign, without name, without experience in command, with feeble and incomplete means, an army inferior in numbers, and ill-provided, he obtains brilliant successes, conquers Italy, and secures it. In the other campaigns—leaving out of the account the splendid combinations developed by them,—the greatness of means, their accumulation, the abundance of resources of every kind, seem to conspire to take away from genius the trouble of assuring the victory.

The chances of success being more numerous for the military sovereign than for the general, the desire would be natural that the former should command; nevertheless it should be otherwise.

In the first place, who is a competent judge of a sovereign's talent? And who will insure that these illusions will not be the cause of inspiring in him a fatal confidence? Supposing even that he does not take upon him supreme command, until he has made numerous essays, there will always be great danger to the state. For reverses, should they occur, will attack in popular estimation the consideration due to the principle upon which the power is based: immense social misfortune! Add to which the command of armies should, for the public interest, be submitted to control. Whatever be the latitude given to a general, there are limits which he must not pass; and if he be freed from these, who will insure moderation in the chances he wishes to try? The greatness of

order that combinations should give favorable results, a strong will must preside; for changes in fixed ideas, without sufficient motive, have many disadvantages, and often produce great disasters.

Two things then are requisite in a general: **intelligence** and **firmness**. The former, because without that there are no combinations; at the outset the army is defenceless. The latter, because without a strong and tenacious will, the execution of the plans conceived cannot be assured. But here relative qualities govern absolute qualities; firmness must rule intelligence. In this relation is found the element of success. If we desired to estimate by figures each of these faculties, I should much prefer a general possessing intelligence as 5 and firmness as 10, to one having intelligence as 15 and firmness as 8. When firmness governs intelligence, and mind has a certain range, we move along towards a defined aim, and have chances of attaining it. When the reverse is the case, opinions, plans and direction are changed unceasingly, because a vast intelligence at every instant considers the questions under a new aspect. If force

catastrophes is always in proportion to the accumulation of means, and the extent of enterprises; and then they shake society to its lowest foundations. The errors or misfortunes of a general are always reparable in a great country; those of a sovereign, whose imagination is excited, lead to complete ruin. Therefore a sovereign should limit himself to governing, administration, the creation of means, and rendering them abundant; he ought especially to bestow a large confidence upon the general who is worthy of it, and reward magnificently and without jealousy; but never assume the responsibility and charge of command.—M.

of will does not secure us from these changes, we float among the different schemes, adopting none definitely, (the worst feature of all,) and, instead of approaching the goal, a shuffling march often leads us away from it, and we are lost in wanderings.

And yet the conclusion would be wrong that there is no need of much mind to accomplish great ends. A *mediocre* mind is not to be found in any of the great generals of antiquity or of modern times, in any of the great historic names which march through the centuries above their fellows. Alexander, Hannibal, Scipio, Cæsar, possessed the highest faculties of intellect. It was the same with the great Condé, Luxembourg, the great Eugene, Frederick and Napoleon. But all these great men, to a superior mind added still more strength of character.

This necessity that the will should govern the intelligence, is felt at every moment by the commander; for in this position it is frequently necessary to take a certain course, and to decide upon it. What men without character most dread is, to fix a determination; a fatal instinct leads them to postpone a resolution often urgent, and which, when it is formed, is no longer useful as a reason for delay, and even sometimes becomes fatal.

This remark authorizes me to proclaim the following principle:—a general may indeed take counsel when he feels the need of it; but the habitual part of office counsellor, unless at the special request of the commander-in-chief, cannot be successful.

The necessity of adopting his own resolutions is then the

painful part of a commander's duty. At that moment responsibility appears, with its imposing train, with all the interests resting upon it, and which, above all, one defends in the bottom of his heart; responsibility towards those on whom he depends; responsibility as it concerns public opinion; responsibility to himself, to his own conscience; immense responsibility, more terrible in proportion as one is more penetrated with the sentiment of its duties. There is but one way of supporting this burden: he must have force and resolution enough to place himself above all consequences, sure of finding in his conscience and in his intentions a generous approbation of what he has done, after having made the best use of all his faculties and of all his intelligence. But there are very few men capable of placing themselves upon such an eminence as this. The necessity for prompt decision is at once so important and so difficult in command, that when the course adopted is of such a nature as not to receive any modification, when the cannon is roaring, and the battle is going on, when each one has had indicated to him the part he is to play, the commander-in-chief is tranquil; he has recovered the security and repose of mind which he could not have the evening before.

Thus, then, when a general possesses the mind to see, judge and combine, and the will to execute; when to these qualities he unites a knowledge of men, of the passions which sway them, of the secret emotions of their hearts, developed in war by so many causes; when, moreover, danger, far from paralyzing his faculties, only increases

their power and gives them new energy; when, finally, he loves his soldiers, is loved by them, and carefully guards their preservation, their interests, their welfare, like the father of a family;—then he unites all the qualities which promise success. I say promise—not assure; for war has such varied chances, it is subjected to so many hazards, that there can never be certainty before the event is accomplished.

In treating of the qualities necessary to the exercise of command, I have meant to speak of the command in chief. A command, however extensive, cannot, when made subordinate, be at all compared with the chief command, however the latter may be restrained by the number of troops; for there is no longer the necessity of overcoming that great difficulty which I have endeavored to make manifest, which consists in resolution. I commanded, under Napoleon, armies of different strength, and *corps d'armée*. Ten thousand men only, given up to the combinations of a single chief, present incomparably more embarrassment, and give rise to more solicitude, than the command of fifty thousand, forming a subordinate part of an army of two hundred thousand. In the latter case, to move, march and fight, according to given orders and with a specified design, are easy things; and when the fight or the marches are terminated, when the camp is established, the general rests himself, like the lowest soldier, waiting for orders: at this very moment, on the contrary, the commander-in-chief is most a prey to disquietude, and must exercise every kind of foresight.

CHAPTER III.

PORTRAIT OF A GENERAL WHO FULFILS ALL THE
CONDITIONS OF COMMAND.

I WILL here give a summary, in few words, of the qualities and the manner of life which should be possessed by a general called to command.

He is brave, and known to be so by the whole army; his courage cannot for a moment be questioned or become a matter of doubt. His valor is characterized by calmness and coolness, (*sang froid*,) without, however, excluding, in certain circumstances, that dash and activity which are contagious and attractive. If his reputation, in this respect, is not sufficiently established, he should seek and seize an opportunity for fixing it upon an immovable foundation; otherwise he cannot exercise over generals, officers and soldiers, that power of respect and esteem indispensable to his success.

Once his reputation is established, he should avoid, without betraying too much concern, being prodigal of his life.

His mind must, as I have already said, be kept in subordination to his will.

His physical strength should resist the greatest fatigue, and considerations of health should never keep him from seeing, for himself, into important matters; for the most

carefully-prepared reports, the recital of the most skilful persons, can never supply, to the same degree of precision, the knowledge which one obtains with his own eyes.

If nature has endowed him with high faculties, it is desirable that he should attain early to command; his successes will in that way be rendered more certain. He will have that marvellous energy and that self-confidence which double his strength. An object of sympathy to all who are young in the army, he will display at the same time a great deference for age, and must be gifted personally with sufficient experience. There are things which only time and experience teach, and which are never guessed at. But too long a habitude of obedience diminishes rather than develops the faculties of command.

It is especially necessary that he should have had practical knowledge of war when very young, and but a little after his entrance upon the career of arms; otherwise he will acquire with difficulty that tact and instinct which such early training creates, and which wonderfully simplify the difficulties of the art.

He will ceaselessly bear in mind that a surprise never happens except as a consequence of culpable neglect, and that a general surprised is dishonored.

It is not only himself but his subordinates also, whom he must shelter from reproach, by preventing their mistakes.

Knowing the value of time, the only treasure which cannot be supplied, he will dispense with writing much

himself, leaving this labor to those who, by explicit function, are charged with transmitting his orders. He will reserve to himself only the approval of their work. Never has a good general written much in war movements. It is the head which must then work, and not the hand. He employs his time more usefully in giving verbal instructions, in preserving freedom of mind to judge whether his intentions have been faithfully rendered, and in meditating upon new combinations.

His activity should be unbounded; his presence, often unexpected, will render every one fearful of being caught in fault; he will thus nourish the zeal of all.

All his decisions will be ruled by an impartial justice and severity in maintaining order and discipline,—thus securing to soldiers the enjoyment of their rights, the greatest welfare compatible with their situation.

If severity is one of his duties, there is another more agreeable to perform, which is not of less importance: I mean rewards due to meritorious actions and to good conduct. He should be neither prodigal of them nor parsimonious; he should consider it his own business to procure them, by making them of more value even than if they were personal benefits. He should especially consider the claims of merit; for if a just reward acts as an encouragement to generous hearts, a reward not deserved destroys all emulation, and gives rise to intrigue. The instinct of man, and his innate love of justice, should always inform the mind which presides at the distribution of rewards.

If the general is faithful to his principles, if he fulfils the conditions which I have enumerated, he will be an object of respect, esteem and affection to the troops. The need of order is so energetically felt by soldiers, that they always love, in a commander, the severity which guarantees it; and they rest with confidence upon him whose decisions are accompanied with known firmness and equity.

Goodness without force is nothing; it confuses itself in opinion, and in reality, with the weakness which abandons a commander to the influence of his surroundings. But goodness, united to a rational severity, makes a general the idol of his soldiers. Rigor, however great it may be, demands certain forms, and should never become insulting: a man is resigned to merited punishment, but abuse irritates him. A just punishment produces the more effect in proportion as it is inflicted with great calmness; violence in a commander authorizes the murmurs of the guilty subordinate. A general, besides, should always treat with consideration every one wearing a soldier's coat. There is in the profession something so noble, the sacrifice of life is so sublime, that those who, by their condition, are always ready to offer it, have a right to our regards, even when they deserve an act of severity.

A general should be habitually grave in his manners, as far as concerns his subordinates; and yet this authority even does not exclude a kind of familiarity, of dignified gaiety, which inspires affection and esteem. There is a sentiment of fraternity, very naturally springing from a

community of dangers, privations and fatigues, and which has nothing incompatible with the rules guarding rank, and the maintenance of discipline. The more then a general forgets his superiority, the less does a soldier lose sight of it. A general should be accessible to everybody.

He should receive and open all despatches at the very moment of their arrival, without letting any consideration of his own comfort cause him to defer it. In the midst of the fatigues of a campaign, although he may have been awakened twenty times in one night, to receive unimportant news, he must not prohibit his people from rousing him again. War news may be of such importance, and the delay of two hours may become so fatal, that the fate of an army sometimes depends upon his immediate knowledge.

A general should be as magnificent as his fortune will allow. His greatest luxury should consist in a large number of horses; he must have enough not to be hindered in any plans he may deem useful. He should have, as the next object of his magnificence, a mansion in which he can constantly dispense hospitality. Never should an officer come to his headquarters, on service, without receiving testimonials of it. It is, in the first place, a praiseworthy act in itself: for the staff officers, or officers separated from their corps, are in such unfortunate conditions as to living, that they would be reduced, if the general did not have a care of them, to a state of real want. To this humane consideration is joined another interest,

which regards the good of the service itself. An officer, charged with despatches, hastens his arrival when he knows beforehand the reception which awaits him. He quickens his march from affection for his commander and for himself. Time, always elsewhere useful, plays so important a part in war, that it must by every means be economized.

A general should neglect no means of knowing in advance and in its details, the country in which he is going to make war. He should procure its most accurate statistics; he should know in what its resources of every kind consist, by carefully studying its topography. The least negligence in this study may have the gravest consequences. He cannot too carefully reflect upon all the circumstances which characterize a country, and on the means of rendering them useful. By procuring, at any price, the best maps, by ceaselessly examining them, even in a general manner, he may be sure of acquiring ideas sometimes felicitous, and of immense value in their application.

The insufficiency of information almost caused the failure, in its beginning, of the immortal campaign of Marengo, in 1800, and produced many difficulties. The First Consul was not aware of the existence of the Fort of Bard, and its means of resistance. We could easily have taken it, by carrying with the advanced troops pieces of sufficient calibre. It was not known that the Little St. Bernard, which debouches, like the Great St. Bernard, in the valley of Aosta, was practicable for artillery; the

passage of the mountains would have been more prompt, without presenting all the obstacles which have constituted it one of the most remarkable operations of our epoch. All projects demand the profoundest secrecy; a general should never communicate them except to those charged with their execution, and at the very moment when their knowledge of them becomes necessary. How many enterprises, well conceived, have failed by reason of having been known to the enemy! Nothing, on the contrary, is more favorable to success than to allow an opposite opinion to the true one to be formed; it is by deceiving those who surround him that a general will make the change more effective upon the enemy.

But in proportion to the importance of concealing his plans, he should inquire into those of the enemy; in this respect he should neglect nothing. Without having a blind faith in spies, he should keep them and pay them well. It is especially useful to procure intelligence by means of employés attached to the staff-corps.

If he succeeds, his first care should be to learn, in detail, the organization of the different corps which compose the enemy's army, and the names of the generals commanding them. With this aid, and light troops well commanded, who, constantly harassing the enemy, make prisoners, sure documents are obtained of the movements he is making. The capture of a single soldier of a certain regiment, announces the presence of a certain division, belonging to a certain corps, and from these facts a general sees the spirit and aim with which his

adversary operates and manœuvres. It is difficult to form an idea of the candor, simplicity, and truth with which a prisoner answers, without suspecting the bearing of the questions put to him, and without thinking that he is recreant to the cause he has zealously served, and which he is very far from wishing to betray.

In fine, the general who values his own glory, should free himself in his operations from absolute dependence; it is always fatal. An enlightened government has not the desire to direct everything; it limits its part to an indication of the aim, after having determined the nature of the means and their quota. It is for the general alone, placed in the presence and in the midst of difficulties, to decide upon the system to be followed and the combinations to be executed. Rather than submit to too direct an action on the part of the government, the general should abandon a command which he cannot exercise in its fulness. Either it should cease to oppose him, if he preserve its confidence, or it should retire him from the command if it think he is proceeding in an improper manner. Government should only act upon the general who has its confidence, through the influence of counsels which do not bear the character of imperative orders; it should especially avoid placing near him an office-councillor; for nothing is more absurd than such a system, and as I have already said, its results have always been fatal. A general may indeed excite discussions, consult men of experience, even receive advice when he thinks it useful to him; but he must never be required to

ask it and to defer to it. In general, in an army, there are only two parts to play:—to obey and to command. Let the government give the command of its armies to those whom it thinks the worthiest, and at the same time let it concede to them an unreserved confidence: otherwise it should replace them.

CHAPTER IV.

THE REPUTATION OF GENERALS.

I WILL close this work with a few reflections upon the reputation of generals, and the reasons upon which it is established.

Generals sometimes attach their names to successes with which they have little or nothing to do; successes obtained in spite of their ill-conceived dispositions, or in consequence of advice received, and appropriately followed.

I have known many of this kind: among others, and the most notable, Marshal Brune,* who, in every respect, was extremely *mediocre*. His name nevertheless is associated with three glorious souvenirs:—with the successes of the French army against the Swiss, in 1798; against the English and the Russians, in 1799; against the Austrians in Italy, in 1800.

In Switzerland, the superiority of our forces, and the divisions existing in that country, necessarily decided the question in his favor. In Holland, he was not at the combat of Bergen; the battle of Bewervich was fought

* In spite of his private qualities and the deplorable death of which he was the victim, we cannot help remembering that Marshal Brune was one of the most singular and striking examples of the caprices of fortune.—M.

by chance, unexpectedly delivered, without prearranged plan, without any direction: the follies and the stupidity of the Duke of York produced definite results. In 1800, in Italy, after brilliant successes, with which the general-in-chief had comparatively little to do, we were in position, had another man been at our head, entirely to destroy the enemy's army.

Contrary examples may be cited, *i.e.* of men of great talent whose efforts have been betrayed by fortune.

But these different examples should not hinder us from judging by results: such indeed is the proper manner of appreciating the value and merit of generals. To assume a different basis, to rest our judgment upon the idea we may have formed of the mind and talents of a general, is to enter an inextricable labyrinth, and often to expose ourselves to error; for each one will only see through the prismatic medium of prejudice, friendship and passion. If we sometimes deceive ourselves in judging by facts, we should deceive ourselves much more in directing ourselves solely by personal knowledge of individuals. Fortune may indeed once or twice overwhelm with her favors a man who is not worthy of them; she may betray the finest combinations of genius, and humiliate a noble bearing; but when the struggle is prolonged, when events are multiplied, the man of true talents infallibly conquers her favors; and if continual reverses occur, we may boldly conclude that in spite of a superior mind and qualities which have dazzled us, a lack of harmony in those faculties destroys their power.

I classify generals in four categories.

I place in the first the generals who have won all the battles they have fought. The first place in public estimation is incontestably theirs. But their number is so small that we can with difficulty find their names. In ancient times, I can only find Alexander and Cæsar. The Grecian generals of illustrious name, such as Miltiades and Epaminondas, have owed all their celebrity to one or two actions.

In modern times, I find scarcely more than Gustavus Adolphus, Turenne, Condé, Luxembourg, and Napoleon until 1812; for I am correct in placing in the number of reverses for which a general is responsible, the destruction of armies through want of proper care and extreme lack of foresight.

In the second category I will place the generals who, if they have often gained victories, have sometimes lost them, after having desperately contested them. These are the great majority of those whose names are inscribed in the temple of memory. Perhaps among them may be found some who are worthy to figure in the preceding class. For between two generals who contend with equal merit, victory must indeed decide for one or the other, but it will have been dearly bought, and its results will be limited.

In the third category will be ranged the generals who, habitually unfortunate in war, and having experienced many reverses, have never been destroyed, nor discouraged, but have always been able to oppose a menacing front, and to impress the enemy with fear.

These generals are rare, and they must have great ascendancy over those by whom they are surrounded. Such in ancient times were Sertorius and Mithridates, and in modern times the celebrated Wallenstein and William III. King of England.

Finally, in the fourth category, there will naturally be found those who lose their armies without fighting, or without making the enemy pay dearly for his victory by a vigorous resistance. As to such, it is easy to mention their names; every country, every epoch, has furnished examples.

CONCLUSION.

FROM all that has been now said, I think I have a right to draw the following conclusions:—

1. The fundamental principle of the organization of an army is found in the fact, and the spirit of aggregation, of an assemblage of men, which becomes a compact mass, a unit; and which, by a skilful and ingenious mechanism, gives great mobility to the different parts of which it is composed.

2. The parts which constitute the elements of this whole must have dimensions, form and limits, which are the necessary consequences of the faculties of the man and of the arms he uses.

3. Nothing is arbitrary in the organization of troops and in the movement of armies. On the contrary, everything must depend upon regulations derived from certain laws. To apply them properly forms the whole of the science of war.

4. An army is composed of *materiel* and *personnel*.* There are natural and determined relations between these two elements, which, however, vary, according to the circumstances and the aim which is proposed. Their pro-

* Although these words have been used throughout the work, it may be well to state, in this summary, that *materiel* includes stores, munitions and equipments of every kind; and *personnel*, every force and contingent of men; the former, the things used in war, and the latter, those who use them.

portions do not depend upon caprice, but only upon the nature of things.

5. The greater or less amount of excellence in these elements exert a powerful influence upon the results; and here the quantity yields in importance to the quality.

6. A third element enters into the value of an army: that is, the moral element. It alone often surpasses in importance all the others, while these, however, have an effective power of the first value; for the corps must exist in order that spirit may animate it. Thus, beyond a certain limit, the real strength of an army is not increased in proportion to the number of troops and of material means; but much more in proportion to the animating spirit.

7. To develop the spirit of an army, to increase its confidence, to speak to its imagination, to elevate the soul of the soldier, such should be the constant object of the cares and efforts of the general.

8. The chief element of military spirit is *esprit de corps*; it is a powerful resource, which cannot be too much maintained. In the opinion of each soldier, the army to which he belongs, and his general, should be invincible; his division the best in the army, and his regiment the bravest and most renowned. With these convictions his strength and courage are increased tenfold.

9. In a word, every soldier should be profoundly penetrated with the idea of his country's glory, and devotion to his prince, who is its representative and exponent: the love of country, that divine sentiment engraved by Provi-

dence upon the hearts of all men, should constantly sustain him, exalt him, and make him equal to existing circumstances. But this sentiment should not be an idle word; it must be sincere, serious, energetic; its reality must be proved, at need, by great sacrifices. The history of all times has preserved examples of this, rare, it is true, but sublime, the results of which have astonished the world.

10. The best army, then, is that which completely fulfils the foregoing conditions; their union and concord constitute its true value. As these conditions are almost all variable and of difficult appreciation; as the mind cannot embrace all possible combinations, no one can determine in advance, in a rigorous manner, the effective power of an army; he can only judge by a sort of instinct, which is not far from the truth. But later it is by the character of its actions and their results that its value may be correctly determined.

I stop here: this sketch is sufficient to effect the object which I have had in view. To give to each part of which it is composed the development of which it is susceptible, would require continued labors which I have neither the strength nor the will to undertake. I have said enough to lead the mind to reflection, and to make it manifest that our sublime profession is based upon principles from which we should never wander: by respecting them, we give to the means of action at our disposal their entire possible value; the constant aim proposed to all who are placed in command.

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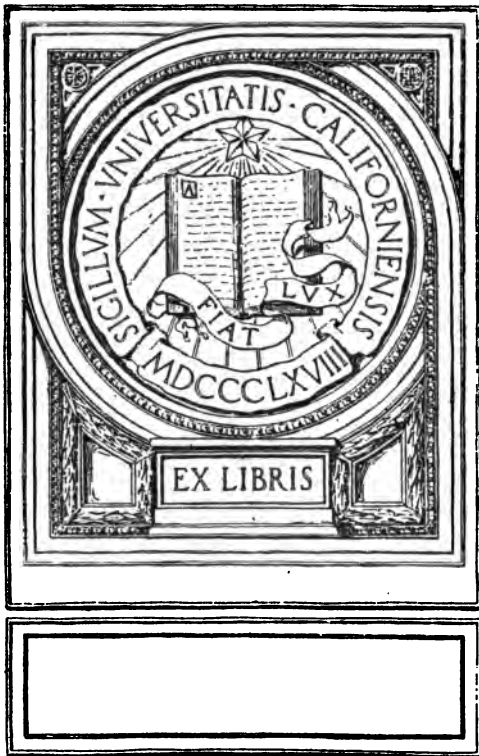
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A FRENCH VIEW OF MODERN WAR

BY
COMMANDANT J. COLIN
OF THE FRENCH WAR SCHOOL

TRANSLATED BY
MAJOR L. H. R. POPE-HENNESEY, D.S.O.
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EDITOR'S PREFACE

NOT the least important part of the preparation of the French army for the present great struggle has been the work done by the "Historical Section" of the General Staff. It has published an elaborate history of the war of 1870—one written in a spirit of judicial impartiality, and with the sole object of pointing out the causes of the French defeats and the German victories. It has also done a considerable amount of work on the campaigns of Napoleon, and this has been only a part of the enormous amount of research and study devoted to these campaigns by French military writers generally. The mass of material which has become available in the last fifty years has been used by these French students of war to evolve a complete theory of Napoleonic warfare.

All this has been done with the practical purpose of providing the French army with a sound doctrine of war, and amongst those who have done this work, one of the most notable is Commandant Colin, a professor of the *École de Guerre*, which does much the same work as our Staff College. He is thus one of the authorised interpreters of the French theory of war, and his teaching represents the views of the French General Staff.

We have an interesting exposition of this theory

in the following pages. They contain all that is essential in a book which he published a few years ago under the title of "Les Transformations de la Guerre." His introductory essay on "Ancient Warfare" has been omitted as well as some of the examples with which he illustrates his theory, but the book contains a complete exposition of his views, illustrated by abundant examples from the history of warfare since the days of Frederick the Great.

It will be seen that much of it is devoted to an investigation of the lessons to be derived from Napoleon's campaigns. It is a special feature of the work of Commandant Colin that he bases his theory not on abstract reasoning, but on deductions from military history. This leads him to investigate the essential features of Napoleon's methods and their application to war under modern conditions.

But he does not neglect the teachings of earlier writers. He is ready even to learn from a German master. He quotes Clausewitz with respect, and when he refers to the war of 1870, he notes that there is nothing to be learned from the French operations, and that only those of the German leaders convey useful lessons. Throughout there is an absence of the bombastic Jingoism of the Bernhardt School. The French soldier writes with the calm assurance that from a scientific study of Napoleonic warfare even to-day we can discover what are the conditions on which victory depends, and what are the best means to be taken to secure it.

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PART I
THE COMBAT

CHAPTER I

THE DEVELOPMENT OF FIRE TACTICS

VARIOUS diverse causes contribute to determining the manner of fighting and of preparing battle in any given epoch and among any given people. Some of these causes, and not the least important, are of a moral nature: such, for instance, are the passions which inspire the combatants, the qualities peculiar to each race, and varying political institutions; but, if we take into our view the history of war as a whole during a long period, causes of this sort are found to differ from day to day, and to counterbalance and to neutralise one another. The great transformations in combat and in war, and their evolution, are due to the progress made in armament, or, in more general terms, to the progress made in those material things which are utilised in the fight.

The invention of gunpowder has given missile weapons a place incomparably more important than in the past, though their rôle was far from insignificant in ancient times.

The shapeless bombards which made their appearance on the battlefields of the fourteenth century played there but an insignificant part. It is only in the middle of the fifteenth century that artillery began

to exercise a serious influence on the form and issue of battles.

The first really efficacious firearms were, properly speaking, neither cannons nor manual weapons. They weighed from twenty to sixty-five pounds. But soon some were lightened and others strengthened. Charles the Bold attacked the Swiss with 400 battery guns and 800 arquebuses for fire from rests. He was beaten at Morat because the Swiss had, and made good use of, 6,000 hand guns. The discharges of these arquebuses threw disorder into the ranks of the Burgundian cavalry, armoured though it was, and the halberdiers profited by its disorder to charge it.

Henceforth, infantry (supplemented by artillery) was able to resume an offensive rôle, above all when it had for its *armes blanches*, like the Swiss of the *fifteenth century*, short and handy halberds or axes; but it lost its offensive value by adopting long pikes and by forming in squares.

There was then a complete revolution in fighting. Cavalry certainly remained the decisive arm, though infantry was now able to put an attack through successfully. The early progress of firearms then was definitely favourable to the offensive.

During the sixteenth and seventeenth centuries portable firearms continued to become more powerful, and above all more easy to handle. The musket succeeded the arquebus, the forked rest was suppressed, and the rate of fire went on increasing rapidly.

In the sixteenth century infantry, armed with pikes, formed big squares which, like the Macedonian phalanx, were intended to receive the shock of cavalry. The arquebusiers, requiring a long time to load their

weapons, could only skirmish at the corners of these squares.

As the loading of the firearm becomes more rapid the number of musketeers is increased. When the musketeer loads his weapon in the space of time required for the firing of six volleys, a continuous fire is obtained from sections formed in six or eight ranks, and the pikemen hardly run any risk of being ridden down by the enemy's cavalry ; they are more effectively protected by fire than by the compactness of their squares.

From 1580 to 1648 the Spanish and Austrian infantry, which longer than that of other nations retains the old formation in large squares, finds itself very inferior to the Dutch, Swedish, and French infantry. In these pikemen and musketeers alternate in small bodies, the latter supporting the former by fire, while the former, if necessary, receives cavalry attacks at the point of its pikes.

After Rocroi and Lens, Spain abandons the use of great masses of pikemen. Their number diminishes everywhere in Europe. On battlefields men throw away their pikes to pick up muskets. At the beginning of the sixteenth century there was one arquebusier to five pikemen ; about 1680 there are, in theory, five musketeers to one pikeman, and in practice the proportion is even greater.

Towards the end of the seventeenth century a musketeer is able to load his weapon during the time needed for three or four discharges. After the adoption of the flint-lock musket the number of ranks is reduced to five, and even to four.

The more rapid and accurate fire becomes, the more

it is desired to increase it. The numbers of the infantry were continually added to. In the days of Turenne it was barely twice as numerous as the cavalry, but it forms five-sixths of the army of Villars. Cavalry, however, still remained the offensive and decisive arm. It was cavalry which charged the enemy when shaken by musketry fire. It remained a decisive arm until the moment when infantry acquired sufficient power of manœuvre to get the better of cavalry itself.

The later battles of the seventeenth century, notably that of Fleurus, herald the advent of the new era in the important rôle assigned to infantry. Fire effect has produced so vivid an impression that now it alone determines the dispositions made on battlefields. The troops are drawn up with a view to the fire fight; it is still only a preparatory phase of the attack, but its result affects the final success to such a degree that "preparation" becomes more important than "attainment." The infantry fills the whole width of the battlefield, and the effort is made to produce a sustained fire such as is delivered by a continuous line.

From this spring those linear deployments which remain characteristic of battle formations for more than a century, and which entail consequences so momentous on the leading of armies.

Troops still are but little able to manœuvre, and the operation of forming them in order of battle is very lengthy, for there is no convenient evolution for forming a deployed line from column of route.

When the use of muskets has become general it is found that their rate of fire (three rounds per minute) admits of men being formed in three ranks, one rank loading while the other two are firing; the manipula-

tion of the weapon, moreover, is sufficiently handy to allow the ranks and files to be closed.

From 1720 on the Prussians are drawn up in three ranks in close order; the French follow suit thirty years later. This shallow formation admits of infantry being able to manœuvre; the line is sub-divided into sections, each section wheeling to right or left, thus forming "*column of sections at deploying interval.*" This is the first drill evolution known.

Firearms struggle successfully though with difficulty against prejudice. What is perhaps most striking, amid the progress accomplished, is the obstinate opposition offered to them, and that, not only by Ministers, but by the most skilful generals. It is not only Louvois who for years persists in banning the musket and maintaining the pike, it is Maurice de Saxe, it is Frederick himself, who will not admit the preponderating rôle of firearms.

Frederick only gives up this idea under the repeated experiences of his own battles. At the outset of his career he renews annually the order to advance to the bayonet attack and to fire as little as possible; he states dogmatically that it is cold steel which decides things; but in 1758 he begins to write that "to attack the enemy without having procured for oneself the advantage of a superior, or at any rate an equal, fire, is to make men who have only wands fight against armed troops, which is impossible." Ten years later, in his "*Military Testament,*" the change is still more marked: "*Battles are won by fire superiority.*" This is the decisive phrase which marks a new era in the fight. Since then, be it at Austerlitz or at Waterloo, at Gravelotte or at Plevna, in the Transvaal or in

Manchuria, *battles are won by fire superiority*. The charge is the decisive act, the climax ; but preparation has assumed such importance, and influences the result of the charge to such a degree that the latter has reverted to the second place.

Frederick draws from linear tactics all that they are able to give, and makes envelopment by the infantry, convergence of fire, and the cavalry charge co-operate in his decisive attack.

Being a man of genius he does not abandon himself to circumstances, and so frames for himself an ideal form of attack, to which he always tries to approximate. "Oblique order" has been much talked about, yet its very existence has been denied. Napoleon insists in seeing in it only a joke, a stratagem of old Fritz to mislead French tacticians ; these, moreover, use the expression "*oblique order*" in the very wide sense of attack on a wing. It is enough to read a few pages of the military works of Frederick to satisfy oneself that oblique order is a real thing ; that it is, as its name indicates, an order or a disposition, and not an abstract principle ; still less is it a joke. Frederick, for instance, wishing to concentrate all his efforts on his right without exposing his left to disaster, refuses his left wing and pushes his right wing forward. Having deployed his army, he advances his right-hand battalion ; each of the others sets itself in motion in its turn in such a way as to find itself refused to the extent of 50, 100, or 200 yards according to the order given. They are thus *écheloned* from right to left, and all the heavy artillery and reserves are accumulated on the right, which is to outflank the end of the enemy's line, crush it under converging fire, and then attack it

with the help of the cavalry. Again it is the cavalry which has the last say in the matter, although the major part of the task has been accomplished by musket and gun.

Such is the final form of combat in linear formation. While Frederick brings it to this high degree of perfection, French soldiers seek for progress along quite other lines.

The deployment of troops for battle, their movements, even their marching in the attack, were remarkably slow, and many officers were busy with these questions at the beginning of the eighteenth century. This slowness had many drawbacks; it was harmful to the offensive spirit and it impeded all manœuvre on the battlefield; but above all it prevented armies from passing rapidly from column of route to battle formations, from hastening the encounter, and from seizing hold of the enemy and forcing him to fight.

The first to propose a revolution in tactics, Chevalier Folard, saw but one side of the question, and that the least important. He thought only of the last phase of the fight, the charge, and he believed that he had put everything right by substituting as a battle formation massive closely locked columns in place of the shallow linear order.

The eighteenth century, from 1721 right up to 1791, witnessed the quarrel and the reconciliation between shallow and deep formations. For a moment, from 1771 to 1776, French soldiers became enamoured of the Prussian methods disclosed by the renegade Pirch, then they returned again to the French system of manœuvre in closed columns. Sometimes these are columns of independent battalions, supple and mobile;

at other times they are big columns of divisions, which are good formations of readiness for reserves.

At the end of the reign of Louis XVI. there remain hardly any adherents of shallow formations who insist on wishing to manœuvre habitually in line, while there are few adherents of deep formations who still see in the column a normal fighting formation. We have drawn very near to a solution common to the two schools, admitting of the use of columns for movements and of line for fighting. This is what the armies of the Republic and of the First Empire will put in practice.

The eighteenth century, at the same time, called skirmishers into being again. They had existed from the most remote past until towards the end of the seventeenth century. On the advent of the musket the desire to provide a continuous fire on the whole battlefield had led to the suppression of isolated marksmen whose presence impeded the fire of the dense lines of battle. But in the eighteenth century the inefficiency of section volleys is recognised; Austria floods battlefields with her Croatian skirmishers, and every one imitates her.

In France the adherents of shallow and deep formations were at one in having recourse to skirmishers in two distinct ways: on the one hand, in piquets of thirty, fifty, or sixty men per battalion, to initiate a fight or to act on the wings; on the other, in battalions of light infantry (*chasseurs*), or sometimes line battalions used as if they were light troops, which scatter through broken or wooded country. The experience of the campaign of 1792 confirmed the use of both forms of skirmishers, under the names of *tirailleurs de bataillons* and *tirailleurs en grande bande*.

In 1792 French troops knew fairly well how to manœuvre so as to apply all the regulation formations; ¹ but during the following two years they were commanded by unskilled leaders, they fought in line, sometimes as skirmishers, sometimes in strange formations in which deployed battalions follow one another at long distances.

Finally, from 1796 onwards, manœuvres were revived in closed columns deploying into line when they came under the enemy's fire. In the great battles, Austerlitz, Jena, Wagram, etc., the divisions moved in groups of small columns, and deployed into shallow formations to fight.

In Spain Wellington adopted tactics which admitted of the greatest possible employment of fire, and he makes a wonderful use of ground to surprise his adversaries. His infantry formed *in two ranks*; a third of his men was used as skirmishers and fell back on the flanks. The French, according to their wont, moved forward in small columns preceded by skirmishers; but suddenly the formidable discharge of the British stopped them at the moment when they wished to deploy. It was soon nothing but a disordered mob which was whirled round and thrown back before the counter-attack.

With the progress of infantry, cavalry had certainly lost the leading place in battle. It still contributed to successes in a notable degree, but it could no longer be the most effective factor in procuring victory. Without it no decision could be complete; but if cavalry still made a victory decisive, it no longer won it.

¹ These were troops of the line and the volunteers of 1791, well officered and trained for nearly a year.

Old Blücher, a hussar, at the height of his struggle with Napoleon, coined the phrase which records the place in war of the two auxiliary arms: "Don't talk to me about your hussars; against that rascal it is guns we want, and plenty of guns!"

Artillery, since the sixteenth century, had been used in most varying proportions. The different Powers had tried without intermission to reach a proportion of four pieces per 1,000 men and to have guns attached to battalions. Only the state of their finances had kept them from always realising this ambition. It is a great mistake to believe that experience condemned battalion guns. "Every day," said Napoleon, "I am more convinced of the great harm done to our armies by taking away the regimental guns."¹ And this step, moreover, was only induced owing to the low state of the funds in 1795.

Frederick had organised a numerous artillery comprising howitzers and a large proportion of pieces of heavy calibre (12-prs., 16-prs., and even 24-prs.). He placed some in his Advanced Guard so that it might never be stopped by any material obstacle, and he used it freely in attacking localities. The French armies of the Revolution and Empire do not seem to have made as rational a use of it. From Gorschen to Hougoumont, for instance, they used themselves up in fights for localities during which they do not make sufficient use of 12-prs. and howitzers.

Their artillery was mingled with the infantry, and fired now on the batteries and now on the battalions of the enemy.

In fact, from the middle of the sixteenth century,

¹ "Correspondance," vol. xix. p. 58, No. 15,272.

the power which guns put at the disposal of the offensive had been lost to sight. Civil wars ruin states, which can no longer afford to maintain a numerous artillery. The decisive effects of the artillery fire at Marignan were no longer remembered; in vain the effort was made to pierce through battalions by hammering with men, and it was forgotten that such a result can be obtained by hammering with guns. We must come down to Friedland (1807) to see a frontal attack succeed owing, almost entirely, to the effect of cannon-balls and case-shot. Undoubtedly the progress effected in armament was favourable to the offensive, but it was on condition that the offensive had recourse to fire and not to cold steel.

This brute-force use of guns, these breaches blown through masses of men by cannon-balls, became the rule. At Wagram, at Borodino, and again in all the battles of 1813, they repeat themselves. It is no longer Ney or Murat, it is Drouot and S enarmont who take the first place. But the enemy opposes battery to battery till, however violent it may be, the action of artillery is in its turn neutralised.

To play the capital r ole which now devolved upon it, it was necessary that the artillery should not allow itself to be surpassed by that of the enemy, either in numbers or in quality. It was the number of pieces rather than that of battalions which henceforth served as the measure of the relative strength of armies.

“It is necessary to have as much artillery as one’s enemy,” said Napoleon. “*Experience shows that it is necessary to have 4 guns to every 1,000 men, including infantry, cavalry, artillery, and train.*”

“ The better the infantry, the more one must husband it and support it with good batteries.

*“ A gun should always have with it 300 rounds. It is the expenditure required for two battles.”*¹

The Emperor “ complained that usually the artillery did not fire enough in a battle. It is an axiom in war that one should not lack ammunition ; *and he advised firing continuously without calculating the expenditure of rounds.*”

He summed up the new tactics in saying : “ The invention of powder has changed the nature of war : missile weapons are now become the principal ones : *it is by fire and not by shock that battles are decided to-day. . . .*”²

“ The power of infantry lies in its fire. In siege warfare, as in the open field, it is the gun which plays the chief part ; it has effected a complete revolution . . . it is with artillery that war is made.”³

After the wars of the First Empire, minds were engaged in putting the experience acquired to good account, and in drawing up new regulations.

The introduction into the French regulations of orders for the fight came about, however, in 1831, when big columns were done away with, as also were linear formations. The skirmishers alone were to carry on the fire fight, although they were always to be widely extended (the regulations laid down a maximum extension of fifteen paces). The proportion to be put into line as skirmishers was quite undetermined : small bodies in close order formed supports and reserves.

¹ “ Correspondance,” vol. xxxi. pp. 328 and 329.

² *Ibid.*, vol. xxxii. p. 27.

³ *Ibid.*, vol. xxx. p. 447

The Prussian regulations of 1847 offer a considerable likeness to the French regulations of 1831, in all that concerns the fight. They also commit to the skirmishers the conduct of the fight, and anticipate that sometimes they will suffice to decide success. That which above all distinguishes them from the French regulations is that they form of each company an independent column. The number of companies put into first line or kept in reserve is variable, as in France; but the battalion reserve consists of companies more or less grouped together, instead of being, as in France, one single column. But these variations are of little moment.

From the squares of the sixteenth century we have come to battalions in eight ranks, in six ranks, in four ranks, in three ranks; in future there will only be skirmishers; the evolution is complete. The French artillery puts the first rifled guns into line in 1859; Austria, in return, secures a rifle superior to ours. This advantage is neutralised by the dash with which our infantry pushes in to close range to begin the struggle. Whatever may have been said about it, the regulations of 1831 are applied as much as regulations ever can be applied on battlefields. The battalion puts into first line a certain number of companies, which extend their skirmishers, and when the moment for it has come, the units or fractions of units kept in reserve move forward and attack. Only in 1859, as in the wars which follow, *the reserves melt prematurely into the skirmishing line, and the companies or battalions go forward to the assault on their own initiative.*

To sum up, the regulations of 1831 aimed at organising a line of skirmishers with weak battalion reserves

instead of the battalion preceded by a few skirmishers ; experience shows that the skirmishing line is quite capable of carrying the fight through to the end, but that one cannot keep reserves in hand.

The Prussian infantry manifests exactly the same phenomena in 1866. It has the well-known Dreyse needle-gun, a far better weapon than that of its enemy, and it very soon acquires a feeling of its own superiority. It makes the greatest use of its fire, which does not prevent it (far otherwise !) from continuing to advance. The employment of fire and the forward movement do not thwart one another ; they support one another. The companies are led on by their commanders and are not carried forward by the impulse of reinforcements from the rear.

“ The tactics of the company columns consist in being preceded by numerous skirmishers, which by degrees the supports come up and join. . . . Every commander imparts a forward impulse to whatever he finds under his hand. The second line strives to get up into first line as soon as possible, in order to take part in the fight in the first place, and secondly because a great part of the bullets and projectiles intended for the first line fall upon the second. All ranks, officers and men alike, seize with joy the first chance of getting forward and of pushing into the first line. But an inevitable consequence ensues : at the outset the troops are drawn up in deep formation in the following way : a skirmishing line, then reserves, and then, farther back, a second line. All this disappears to give place to one single line, thin and long.” ¹

¹ “ Essay on Tactics,” by May, translated by Furcy Raynaud, pp. 12 *et seq.*

The whole fight, right up to the end, was carried on by the skirmishers, to whom the compact masses of the Austrians offer excellent targets.

By a singular combination of circumstances the Austrian artillery found itself in a position of superiority to the extent of sometimes stopping the progress of the hostile infantry, although the Krupp guns ought to have secured to the Prussians an undisputed advantage. The latter had not had time to study the characteristics of the new artillery and to draw from it the tactical possibilities inherent in it. They were happy in the possession of a gun which shot accurately to 4,000 yards; they imagine that they will be able to destroy the enemy's guns even at such ranges as that; but the new shell bursting on graze had not got so extensive a radius of action as the old round shot fired to ricochet; the accuracy of fire, however remarkable it might be for the time, did not admit of fire for destruction of material by direct hits at 4,000 yards. Some officers, on the other hand, being accustomed to come into action at 1,000 or 1,200 yards from the enemy, continued to do so with the new equipment, thus losing the benefit of its advantages.

Finally, a fairly large proportion of the artillery was kept in reserve to be used in mass, at close range, at the decisive point, as was done in the wars of the First Empire. This reserve, being unable to pass the marching columns on narrow roads, never came up in time.

To sum up, the Krupp guns cut rather a poor figure in this war, and after the campaign were the target of violent criticism. It required the clear-sighted deter-

mination of General von Hindersin to preserve the new equipment, to discern the errors which impaired its efficiency, and finally to correct them radically in three years by means of admirably devised practices and instructions.

CHAPTER II

THE COMBAT IN MODERN WARS

§ I. THE WAR OF 1870-71

THE effects of the breech-loading rifle, especially those of the needle-gun, produced a great sensation in France and in Germany. Later on, under the impression created by the events of 1870, it was asserted that the opinions held in France, and above all the Ministerial instructions issued from 1866 to 1870, had defensive tendencies which contributed materially to our disasters. This was not so. The writings, whether official or not, published at that time in France and Germany were inspired by the same ideas; if there is a difference, it is rather in favour of the French regulations, and it is elsewhere that the reasons for our reverses must be sought. It is essential to satisfy ourselves on this point, and to affirm that good regulations are not enough to make well-trained troops.

That which impressed the imagination most deeply was the preponderating influence of fire. Moltke, uneasy on account of the possibilities of the chassepot, wrote in 1869 in his "Instructions for the Commanders of Large Formations":

"The advantages of the offensive are well enough known. It enables us to impose our will on the enemy, obliges him to subordinate his dispositions to ours,

to seek means to oppose us—that is understood ; but, in the end, he may find these means. The offensive knows what it wants ; the defensive is in a state of uncertainty ; but in the end it may penetrate the intentions of the assailant.

“ The offensive attitude kindles the spirit ; but experience has proved that this state of exaltation is transformed into an opposite condition no less acute if one suffers heavy losses. . . .

“ It is absolutely beyond all doubt that the man who shoots without stirring has the advantage of him who fires while advancing ; that the one finds protection in the ground, whereas in it the other finds obstacles ; and that if to the most spirited dash one opposes a quiet steadiness, it is fire effect, nowadays so powerful, which will determine the issue. If it is possible for us to occupy such a position that the enemy, for some political or military reason, or perhaps merely from national ‘ amour propre,’ will decide to attack it, it seems perfectly reasonable to utilise the advantages of the defensive at first before assuming the offensive.

“ In the face of that craving to push on which inspires our officers and men, it is necessary that commanders should hold them in rather than urge them forward. . . .

“ On the same line of reasoning, positions properly so called again assume importance, but their character is not quite the same as formerly. We must wish the enemy to attack us, and must not seek for unassailable positions.”

We may well be astonished that the troops to whose leaders these “ Instructions ” were issued always acted offensively ; we shall be still more surprised, after

reading the French regulations, to find that it is actually the French authorities who have been reproached with defensive tendencies and the cult of positions.

The "Observations" of 1867 declare that "fire has to-day acquired a preponderating effect on the battlefield," but they in no wise infer from this, as does Moltke, that it is necessary to remain on the defensive. It is of the attack that they speak in the first instance as being the normal form of the fight. They explain clearly that in the attack modern weapons compel us to take precautions about which men did not bother in Africa, in the Crimea, in Italy, and in Mexico; but they are far from insinuating that this is a reason for abandoning the offensive.

The "Observations" have often been abused for the following phrase, the only one which is quoted: "*Frontal attack, over open country, against unbroken infantry, especially if it is protected by obstacles or by cover, has always been a dangerous operation. To-day particularly, with the new weapons, the advantage is on the side of the defence.*" Now, as Moltke says with good reason, it is patently true that the motionless and covered marksman has an enormous advantage over the attacker who is compelled to expose himself continually; and the attacker can only overcome the defender if he counterbalances this advantage by other factors of superiority—numbers, skill, the help of artillery, etc. In this connection let us remember that the advantage acquired by the defence is above all due to the introduction of breech-loading, thanks to which the soldier can remain all the time under cover. The great difference between the war of 1866 and former wars is that the skirmisher is under cover or lying down.

To sum up, the few words which have been so much abused in the "Observations" of 1867 contain nothing which should astonish us; they can only become harmful if, like Moltke, we are led to extol the defensive. But this is what the "Observations" do not do. They point out that there are dangers to be guarded against, and that is all. And we will guard against them, and we will attack!

"Direct attack, ending in a bayonet fight, accords with the impetuous character and courage of our men. Let us persist in encouraging its use, but without losing sight of the fact that modern improvements in shooting, *skilfully turned to account by an enemy who is more collected*, might well turn into disaster the *unprepared* attack on a position which is *openly assaulted*."

Might we not say that the authors of the "Observations" foresee Moltke's defensive doctrine, and teach the opposite? They are clearly possessed of the offensive spirit, and it is not they who dream of avoiding the assault and the hand-to-hand fight: once the fight has been entered upon by the skirmishers and the artillery, "the troops soon see the time come when *the hand-to-hand fight*, the last act of the struggle which has become general, *will decide the victory*. After favourable conditions for its delivery have been brought about by manœuvre, this decisive attack must be prepared by fire. Then the attacking columns, rapidly formed, go boldly forward with all the confidence which springs from the practical certainty of success. . . . No fire, but a determined advance to close on the enemy with the bayonet and at the charge."

In truth this is a strange sort of defensive! The

“Observations” do, however, mention the defensive, but it is to say that one must beware of thin lines: they are *difficult to give a lead to, a capital defect*, for “*the best way of defending a position is oneself to attack.*”

Such is the teaching which has been reproached with defensive tendencies. To us, on the contrary, it seems inspired with the purest offensive spirit as well as with great ability. What it may be found fault with for, on the experience of subsequent events, is for not realising that *the skirmishers can put the fight through right up to the end.* Undoubtedly the conception of attack in company, half-battalion, or battalion columns is more enticing, but one must recognise facts; the attack in columns has never been anything but a fiction, and it is more so now than ever.

All this offensive doctrine, and all the traditions of the Crimea and of Italy, come to naught on the battle-fields of 1870, like the teaching of Dragomiroff and the tradition of Skobeleff in the war of 1904. No regulations or traditions take the place of practical training.

Thanks to the deplorable changes introduced by General Lebœuf, our artillery found itself inferior in 1870 to what it had been in 1859! The gun had a sufficient range; the exclusive use of fire with time fuse ought to have given us a fire effect greater than that of the Prussian shells; but on the other hand the suppression of four of the vents of the fuse made it out of the question for us to produce any effect whatever at ranges between 1,500 and 3,000 metres.¹ Our army, deprived of artillery, could not bite, so to speak.

¹ The *fuse* is that which causes a shell to burst either on graze (*with percussion fuse*), or in the air after a certain time has elapsed (*with time fuse*). It is set for the desired time by pricking the *vent* corresponding to this time.

The inadequacy of the artillery had much to do with the defensive attitude of our troops at the outset of the war.

The German batteries, having nothing to fear from ours, were able to turn their fire on to our infantry. Against even the smallest formations in close order they had a very serious effect, and imposed on our troops premature deployments, either into extended order or into line in two ranks. From the accounts of the battle of Froeschwiller it is easy to see how often the counter-attacks of our infantry and its attempts to rally were stopped by the enemy's guns.

At Froeschwiller, as at Forbach, our infantry act as offensively as the general situation admits. The counter-attacks in front of Froeschwiller were marvels of energy, but, being unsupported by the artillery, they collapsed under the fire of the Prussian batteries.

Before Metz the situation was no longer the same ; the army had been beaten, and the higher command produced on it a depressing effect. Helped thereto by the Prussian gun fire, we fell into a perfect abuse of line formations. On August 16, as soon as the enemy is reported, lo and behold ! all the battalions of the 2nd Corps, then all those of the 4th Corps, deploy without any more ado. Then comes the moment to charge ; no general or colonel, brandishing his sword, can shake these long lines into movement. By good luck some captain will seize the initiative to do something on his own account ; he will carry his company with him, the others will follow little by little, but it will be slowly and late. The opportunity for charging will have passed.

The regiments lose all capacity for manœuvre and

all aptitude for the offensive as soon as they have adopted this rigid formation, which for a hundred and fifty years efforts have been made to avoid.

The Prussians, trained in applied tactics, directed their company columns according to the lie of the ground and the position occupied by their adversaries. They moved handily, easily, with that freedom of gait indispensable to the offensive. On coming within range, each company extended one out of three sections ; it extended a second section when the first found itself 400 or 350 metres from the French skirmishers, and, in most cases, the whole company found itself in the firing line in a few moments, for no body in close order can remain under fire.

It is well known how the columns of the Prussian Guard suffered while debouching on the glâcis of Saint-Privat. The German infantry as a whole suffered such losses in the battles of the month of August that a special order of King William was issued prescribing that nothing was to be neglected which might render formations less vulnerable. It was then that the new tactics came into being, tactics which were set forth by the Duke of Wurtemberg in a well-known pamphlet. Sections of skirmishers gained ground by running forward, and throw themselves down. Behind them, also at racing pace, came the supports and reserves in small groups. They lay down to recover breath and then started running forward again. Having got within effective range, they lay down again and open fire.

The attack in thin lines, covered by skirmishers, was adopted as the only form of offensive in open country, and it was strictly forbidden to expose to the enemy's

fire units in close order at ranges of under 1,500 metres.

In the French Army, the generals of the war of National Defence followed the same principles; they form their infantry in two lines of skirmishers, 600 metres apart, followed by deployed lines, at distances of 600 metres between lines.

A remarkable fact is that although the worth of the recruits and "mobiles" taking part in the second portion of the war was greatly inferior to that of the old troops who fought before Metz, they acted more on the offensive. This was partly because of the new tactics adopted and also partly because the artillery had made up its mind to replace the two period time fuses by percussion fuses admitting of bursting shells at all ranges.

The war of 1870 confirms this important point, which had already been established in 1866, that the fight is carried through up to the end by the firing line, and that the firing line does not confine itself to fire action but also assaults.

Few truths are better demonstrated or more important, but also few are harder to accept: no special troops, no assaulting columns, are required to complete the attack; the skirmishers retain enough *morale* to plunge into the hand-to-hand fight on their own. Close order is useless, impracticable in the attack as in the advance.

The attempt has been made to draw conclusions from this war as to the use of artillery. The enormous superiority of the German artillery would have sufficed to assure it of success no matter how it was used; yet what it did in 1870-71 was held to be consecrated

by experience. Thus it was that the following rules were admitted, viz. that all the artillery should come into line as soon as possible, engage in a duel with the enemy's artillery, crush the latter, then prepare the infantry attack by a lengthy fire on the enemy's positions.

For twenty-five years and more the artilleries of Europe have lived on these principles, which really rest on no foundation of irrefutable experience.

From the great battles of the whole war one general conclusion is to be drawn, and that a most definite one, that fronts are inviolable. In spite of their superiority in numbers and in tactics, the Germans never succeeded in taking a position by a frontal attack, and the French still less so.

The defensive has of course shown itself to be incapable of leading to victory, but on the battle front it has everywhere made proofs of that superiority which Moltke attributed to it. Whether it is a question of the French at Saint-Privat, or the Germans at Champigny or Héricourt, well-chosen and well-arranged defensive positions, even when very weakly held, could not be carried. The same phenomenon will be found again in 1877 at Plevna, and later on in the Transvaal. On the Lisaine, as on the Modder and the Tugela, the defence is made good by troops in little depth: one to two men per yard of front.

§ 2. TACTICS IN PEACE-TIME (1871-99)

The "Report to the Minister," the preamble to the French Regulations of 1875, expresses the conclusions which the war, still fresh in men's minds, imposed:

“(1) The preponderating importance of fire as a method of action.

“(2) The impossibility for a body of troops of any considerable size to move or to fight in close order, whether in line or in column, within the zone of the enemy's effective fire.

“(3) Consequently, the necessity of subdividing the troops in the first line and adopting for them action in extended order.

“(4) *The compulsory transference of the fight itself to the skirmishing line, which formerly was only entrusted with its preparation.*

“*Troops massed in column, or in line in close order, can no longer manœuvre, fight, or even remain in position under fire. . . . In consequence of the destructive effects of fire, such formations no longer afford even the assurance of solidity nor that aid in maintaining cohesion and facilitating control of the men by the commander which they formerly did.*”

“One had good grounds for believing,” says General de Négrier, “that since the doctrine was determined under such conditions, *nothing would be easier than to follow the path marked out.*” But, withal, as impressions faded, the heroism of military writers showed itself on paper in a firm determination to achieve the impossible. Some in order to obtain a heavier fire, others to provide more forcible shock action, contributed to rehabilitate close order formations.

The Regulations from 1875 to 1894 have one characteristic in common: springing apparently from the original text of those of 1875, they maintain the complex system of firing line, supports, local reserves, and reserves in échelon. So, just as the old soldiers

of 1815 feared would be the case, the fight is regulated to excess: the frontages, the distances, the movements of the successive échelons, the whole progress of the combat is minutely legislated for. We pride ourselves on being at last freed from the old-time linear evolutions. We have gone one better.

Properly interpreted, the events of 1877 would have opened the eyes of tacticians. Before Plevna, the Russian guns embarked on a lengthy artillery preparation of the attack, then ceased fire to let the infantry pass. The latter found the Turkish trenches defended by a violent rifle fire. It threw itself forward as a whole into the front line, where it formed but a mob; the compact masses coming up from the rear were unable to cause a forward movement; Skobelev, however, carried his men on with him by placing himself in front of them and marching on the enemy.

As regards the artillery, these events were ill interpreted everywhere. It was not recognised that the fault of the artillery at Plevna was to have ceased fire at the moment the infantry assaulted. The inference drawn was only that the preparation had been insufficient, and that mortars or high-angle guns had been lacking.

The infantry regulations from 1875 to 1900 do not say a word about artillery; this was so, not because the latter could afford to take no interest in the principal arm, but because it was admitted that it must act first, and it was held to have completed its task when the infantry advanced to the attack. In the second part of the war of 1870-71 the Germans had often had recourse to a prolonged artillery fire before assaulting; they counted much on the co-

operation of guns; but they thought to use them before, and not during, the infantry attack. All European armies adopted the same doctrine.

As to infantry, the majority of military writers at that time recognised that it must act by its fire, but they drew unwarranted deductions from this fact: "It is necessary," they said, "to acquire fire superiority, and to this end, other things being equal, the greatest possible number of rifles must be put into line. Why, therefore, this extension at the outset of the fight, this thin-drawn line of skirmishers, since later on it is reinforced? Would it not be better to put all these rifles into line from the beginning and secure to ourselves fire superiority as early as possible?"

Thus we come, about 1895, to moving whole battalions in single rank, without intervals between the men. Words are juggled with; we call by the words "skirmishing line" a line whence even anxiety about the "dressing" is not absent, and where the men have nothing of that freedom and that initiative which characterised the skirmisher in 1794, in 1806, and in 1859.

At the same time that the Regulations of 1894 prescribe linear formation for the fight, the tacticians who lay down the law at that same epoch impose on us "decisive" attacks by brigades or divisions in mass.

Offensive spirit, preponderance of fire, all the major lessons of the war have been remembered. Only there has been forgotten this established fact, so clearly brought out in the Report of 1875 to the Minister: "*Troops massed in column, or in line in close order, can no longer manœuvre, fight, or even*

remain in position under fire. . . . In consequence of the destructive effects of fire, such formations no longer afford even the assurance of solidity nor that aid in maintaining cohesion and facilitating control of the men by the commander which they formerly did."

"There then arose," says General Kessler, "a new school, extolling dense formations, not only for marching and manœuvring, but also for the fight itself.

"A complete military technology implanted itself in modern teaching, which has had the pretension to discover formulæ guaranteeing success, and delights in the use of sounding phrases, such as: 'troupes de choc,' 'masse de manœuvre,' etc., etc.

"The influence of these innovations has made itself felt even in the transformations which our manœuvre regulations have undergone. . . . The teachings of the past are completely forgotten, and certain treatises on infantry tactics, reviving old methods, proved impracticable by the experience of recent wars, have come to consider the column as a possible fighting formation for the troops labelled '*for shock action,*' and called on to carry out the '*decisive attack.*'

"Fire, with its brutal realism, will very soon put all these things right, and will blow away in smoke all these fine theories about the employment of masses.

"*Officers who have not made war* readily grant that a body of troops which is energetically commanded ought to overturn all obstacles; they *ignore the fact* that fire, besides the losses which it inflicts, exercises a depressing effect which is the more intense according as the losses incurred are produced more rapidly. . . . The first-line companies will perhaps reach the enemy's

position, but the compact columns which follow them, far from bringing them the help of a strength *which may not be necessary to them*, run the risk of entailing general disorder and bringing about a disaster owing to the fearful losses which they will suffer."

Thus spoke the real *masters*, those whose clear minds, vigorous talents, and experience gave them the right to command. One knows, moreover, that attacks in mass were not even anachronisms, for they were never crowned with success at any period.

§ 3. THE TRANSVAAL AND MANCHURIA

(a) *Artillery*

From the point of view of the combat, it might seem natural to study in succession the two wars of the Transvaal and Manchuria, which have given rise to such diverse lessons. But this is not so, since we find in these two wars an organised series of experiments, and circumstances, now grouped, now separated, just as the wisest scientific method would arrange them in order to make the conclusions stand out. For us these two lessons, with their alternations of agreement and opposition, are complementary to one another, and we think it better to study them together. The armament is pretty much the same; smokeless powder, magazine rifles, guns which fire slowly or of which the rate of fire is accelerated, but not quick-firing.

The point on which, perhaps, the teaching is clearest is the use of artillery. We will study it first of all so as to clear the ground for consideration of the

more difficult and more important question of the infantry fight. No doubt the guns used in the Transvaal and in Manchuria were without shields and were not equipped for indirect laying, but, in spite of this differentiation from the equipment of to-day, we can easily perceive the essential principles still applicable in the employment of artillery.

In the Transvaal artillery gave only a trifling support to its infantry. It was present only in inadequate quantity: two and a half guns per 1,000 men on the British side and one and a quarter on the Boer side. The British, conforming in this to the principle adopted by all European armies since 1871, laid great stress on artillery preparation of the attack: for long hours and even for whole days they shelled the *presumed* position of the enemy, who gave no sign of life or held his peace as if he had been compelled to do so. The artillery ceased fire when it considered its task completed. According to the British generals, it ought to have so shaken and exhausted the enemy that the latter was ripe for assault. The infantry had hardly begun its movement when the batteries ceased firing; at most the first line was 500 or 600 yards from the enemy. A few moments later the latter began a terrible fire, and proved that the result obtained was negligible.

In Manchuria the situation was quite otherwise: the number of guns exceeded three and a half per 1,000 men and their employment was absolutely different. So far from abandoning its infantry when it entered on the decisive phase of the attack, the Japanese artillery (after Liao-Yang) continued to fire right up to the last minute, right up to the moment of the hand-to-hand

fight, even at the risk of making victims in the ranks of its own infantry, as happened several times. Here is the essential point ; the artillery maintains its fire, with a growing intensity, right up to the moment when the infantry assaults the enemy with the bayonet.

The second point to note is that if the Japanese, as we have just seen, practise inter-communication and co-operation between the arms to the greatest possible extent, they do not for all that come to the conclusion that the artillery should continually mix itself up with the infantry fight, and take as its principal target the hostile infantry. Experience has shown that this is not the best way of helping one's own infantry.

“ Artillery fire,” says a Japanese instruction published after the first battles, “ is only directed against the enemy's batteries. The whole of the artillery seeks to enfilade them or take them in reverse so as to extinguish their fire rapidly. . . . Even in such conditions it will take a long time to reduce the hostile artillery to silence. So at first one devotes the bulk of the artillery to fire on the enemy's artillery ; one only uses a portion of it against the infantry.” Later on the proportions are inverted and when the enemy's batteries have been more or less silenced, one proceeds to the preparation of the attack. Then, says the instruction, “ the artillery takes up a more forward position ; . . . the point of attack being known precisely, the bulk of the artillery opens fire on this point, the remainder fires on the enemy's batteries. The infantry begins to move forward. . . . The progress of the infantry and the fire of the artillery should be regulated on one another. When the infantry is about to assault,

the artillery changes its objective and engages the hostile artillery with the bulk of its guns; the remainder beat the ground beyond the point of attack."

Thus there is *no permanent task*; the batteries fire in turn on artillery and on infantry.

After the first battles, Japanese and Russians recognised the necessity of covering themselves from view completely, and as they hardly ever found any crest-covered positions enabling them to bring fire to bear on infantry at short range, they had to choose between exposed positions where the batteries sacrificed themselves without rendering any service, and distant positions whence the view was restricted and the fire of but small effect.

To accompany infantry in attack and in defence, recourse was had to machine-guns, easy to carry and to hide even in the firing line. Few in number at the beginning of the war, they proved themselves so useful that both armies continued adding to their number.

Large-calibre howitzers, which had been of but little assistance to the British in South Africa, were much appreciated by the Japanese, though we do not know exactly what material effects they produced.

In the first engagements, and notably so at the Yalu, the Japanese artillery had an overwhelming numerical superiority: 258 pieces to 46, 200 to 88, 144 to 16. It was, therefore, like the German artillery in 1870, able, without any difficulty, to give most effective support to its infantry. From Liao-Yang on, the two hostile artilleries were pretty well equal; and moreover they had completely renounced the use of exposed positions. From then on, there were no more decisive advantages.

"Invisibility," says General de Négrier, "has become an essential condition: that is the outstanding fact of the whole war. When batteries allowed themselves to be seen, or when their emplacements were located, they found themselves in a few moments so knocked about that it was not possible to withdraw them from the battlefield. For the most part it was necessary to keep the teams under shelter at 800 to 1,000 metres from the batteries. . . . Battery commanders were frequently obliged to remain far from their guns. Often the Japanese observers climbed trees, whence they communicated verbally with the gun detachments, or again they went forward to the crest masking the battery and were linked up with it either by telephone or by signals made with flags or discs."¹

Let us add, on the subject of the difficulties which artillery fire presents, that on comparatively narrow fronts like those of Froeschwiller and Gravelotte, batteries were pretty well obliged to occupy certain crests between determined limits. It was then possible to shell these compulsory positions without wasting ammunition too uselessly. This was not the case in Manchuria. Russians and Japanese spread themselves over very wide fronts; the guns were scattered along them, leaving considerable empty spaces, and it was difficult to hit them by systematic searching.

Thus it was proved that to-day "a well-concealed artillery can engage a numerically much stronger artillery without getting itself crushed, and can lead the opposing artillery to waste its ammunition."²

¹ *Revue des Deux Mondes*, January 13, 1906.

² General W. de Heusch, *Journal des Sciences militaires*, May, 1908.

The Japanese did not range with time shrapnel; the Russians on the contrary did so invariably. The advantage rested clearly with the old method of fire, and with the unhurried and accurate ranging practised by the Japanese.¹

The Japanese declare that they suffered little from the Russian shrapnel during the attacks, but that they suffered enormous losses whenever a body of troops in close order, even a mere company, exposed itself in the open at long range.

The Japanese infantrymen could escape the hail of shrapnel bullets if they were warned of its imminence by the ranging rounds; if the sudden outburst of fire came without preliminary ranging, the small body fired at was pretty well annihilated.²

The Japanese gunners for their part tried to avoid attracting the attention of their enemy by long-drawn-out ranging. They used every means of getting the range before firing, and above all made use of their maps. However imperfect these were they did them good service.³

All this information, reported with quite remarkable unanimity by the military attachés, gives one the impression that the task was complicated and the results achieved poor. Yet the British military attachés are struck by the decisive importance of artillery.

"The greatest impression made on me, and on which I cannot insist too strongly," says Major Hume, "is that of the preponderating effect of modern

¹ "British Officers' Reports," vol. ii. pp. 216-218, 572-575; vol. iii. pp. 216-220.

² Captain Duval, "Conférence sur l'Armée japonaise faite à l'École supérieure de Guerre."

³ "British Officers' Reports," vol. ii. p. 596.

artillery ; it does not seem to me exaggerated to say that, in the actual conditions, artillery is the decisive arm, and that the others are no more than its auxiliaries." ¹

(b) *Infantry—the Attack*

One speaks habitually of the war in the Transvaal as if the Boers had come out of it as victors, and one is given to contrasting the reverses suffered by the English in Africa with the successes of the Japanese in Manchuria. One must not forget, however, that the Boers were beaten by the English. This defeat of levies, due indeed to superior numbers, but above all to lack of discipline, cohesion, and offensive spirit, was inevitable, in spite of excellent natural qualities and favourable conditions at the outset, and contains the first and the most important lesson of this war. It is not for the empty pleasure of composing pompous aphorisms that at the head of one section of the Regulations is written, "The offensive alone can procure decisive results," and at the head of another section, "Discipline is the main strength of armies." Never has the truth of these precepts been more clearly demonstrated than in the Transvaal. The Boers at the beginning of the war are more numerous than the British ; the situation is made altogether favourable to them by their knowing the ground and being accustomed to it, by the sympathy of the inhabitants and the proximity of their resources. In the first engagements they obtain successes by surprise which place at their mercy bodies of British troops, but they never derive any advantage from it.

¹ "British Officers' Reports," vol. iii. p. 209.

At Modder River, for instance, on November 28, 1899, they succeed in enclosing Methuen's troops in a semi-circle of fire, and keep them lying there during five dreadful hours (the temperature was over 100°), but they never dream of outflanking them and attacking them. The fact is that no attack is possible without an organised movement, without a dominant will, without commanders whose authority is recognised and whose orders are obeyed; and that there is none of all this in these bands of free burghers, too free to follow blindly one of themselves. So much liberty cost them their independence.

The Boers were brave and were good shots; one must not, however, exaggerate anything: their skill in shooting hardly excelled that of good European infantry; as to their courage, it did not prevent them from keeping one eye on their horses and a thought for their families, and from never waiting for the assault. There was nothing in all this, whether from the point of view of the shooting or the fighting worth of the individual, which ought to have stopped the steadfast British infantry. At Modder River, after all, it found itself within effective rifle range of the enemy, in a position which as a rule one only reaches after prolonged and painful efforts. It could, so it would seem, continue to fire and resume the forward movement in conditions as favourable as those of the Japanese when they arrived at short distance from the Russian trenches. But there was a profound difference between the two cases: the Boers, spared by the British shrapnel, had kept an unimpaired morale and a perfect coolness which was at once heightened by the success of their surprise; nothing, therefore,

compensated the British for the advantage which the defender drew from his position and his entrenchments. When the Japanese arrived at close range, the Russians, on the other hand, had already been shaken for a long time by a combined fire of artillery and infantry.

To this let us add that with certain exceptions the Russians shot indifferently, whereas the Japanese shot well, and we all realise why the situation of the British, at a short distance from the Boer trenches, was markedly inferior to that of the Japanese when they had got to within a few hundred yards of the Russian trenches.

At the beginning of the war in the Transvaal the British undoubtedly assumed formations which were too dense; but towards the end they had spread themselves out in thinner and thinner lines without obtaining much more satisfactory results. They had changed the form but not the spirit of their tactics. Their first line, originally in two ranks in close order, then in single rank, and finally in skirmishers at a wide extension, none the less retained its linear character. It was a long *continuous* line, *not articulated*, and was under a *single control* without subdivision of command and delegation of independence of action to the leaders of the smaller units. "Our soldiers," said Lord Roberts, "have no initiative; they are not clever at making use of ground, and although good target shots, are not trained to battle shooting." A continuous and even line, no matter what its density, composed of such troops was deprived of all the elements which could make it active and handy in manœuvre.

Another fault of the British infantry, or rather of its leading in most of the actions in the Transvaal, is its predisposition for shock action and contempt for the fire fight. That is a deadly tendency in all armies ; it harmed the French in Spain in the days of the First Empire, the Austrians in 1866, the Russians in the attack on Plevna, the British in this Transvaal war, and the Russians again in Manchuria.

It is a remarkable fact that the British, dreaming only of the hand-to-hand fight, never succeeded in achieving it ; the Japanese, practising the fire fight, often got to the hand-to-hand fight, and in it overcame the pupils of Dragomiroff. There is in that, however, nothing to surprise a reader who has followed with us the evolution of the combat from earlier times. In all times the struggle with cold steel has been the final phase, that which confirms the decision, the expulsion of the enemy from his position, and the conquest of the ground ; but in all times, likewise, this final consummation has come to those who willed the means *before* willing the end. Attack with pike, sword, or bayonet gives the last shock to the enemy's morale ; but to shake that morale and put him at the mercy of shock action the losses inflicted by bow and sling, by rifle and gun, are needed.

Troops led against the enemy with the idea—clearly a most valorous one—of getting to the hand-to-hand fight as quickly as possible, will fail in their attack ; on the other hand, troops who advance methodically, careful to inflict on the enemy losses at least as great as they themselves receive, may attain the desired end.

The Japanese in Manchuria pushed forward with the

greatest determination, but at the same time were careful to note the effect of the fight on the enemy's infantry.

"The first essential to pushing forward boldly," says Major Löffler, "is to feel that the enemy's energy has diminished.

"The Japanese infantry, as a rule, displayed a keen and impetuous wish to close with its adversary, and after the first halt where it had opened fire, it continued its advance rapidly, interrupted by short halts which it used for firing; it continued like this until the enemy's fire became too heavy, and in this way it made good several hundred yards to the front; but its own forward impulse was not enough to carry it right through—it needed the intervention of some outside factor, such as a more numerous artillery or a flank attack by other troops which could not be seriously opposed . . . to enable it to resume its advance. Every time that it could do so, every time that the enemy's fire slackened, the Japanese firing lines resumed their advance without hesitation."

This noteworthy sketch is as clear as it is precise and correct: the essential thing for attacking infantry is to have at the same time the keenest desire to push on and the wisdom not to advance without having felt that the enemy is shaken. To succeed *it must have an element of superiority*: infantry will scarcely find this in its own fire, which will rarely be more effective than that of the defender, but it will always find it in artillery fire and in envelopment; finally, it requires keen leaders who will carry their units with them. As to the periodical supplies of men drawn from reinforcements and supports, which our regula-

tions from 1875 to 1895 made the keystone of their arch, they come last of all.

This, in truth, is what, in the combats in the Transvaal and Manchuria, is essential and most concerns the spirit and soul of fighting.

But while admitting that the question of formations has been too much dwelt on it must not be neglected. A vicious formation kills the spirit, or at any rate hampers it.

We have indicated briefly what were the British attack formations in the Transvaal; always a line, of infinitely varying density indeed, but continuous, unarticulated, and without supports.

The Japanese in Manchuria made use of methods seemingly the most diverse; the density of their skirmishing lines varied extremely, their rushes were from 20 to 150 yards in length. They sometimes crossed vast spaces without firing a shot, while sometimes they maintained their fire for several hours together.

In broken ground one saw fairly thick skirmishing lines (one pace interval between men) making 80-yard rushes by whole companies. The supports, local reserves, and reserves were usually formed in small columns of about fifty men, and deployed when they had to cross an exposed zone. The advance was hardly interrupted, and the assault was begun at 300 yards from the enemy.

In flat country different precautions were necessary. The firing line was very thin (five to ten paces between men) at the outset. It made rushes of 20 to 30 yards by groups of twenty to twenty-five men. Every group had its leader who led it towards its

point of attack without being bound to follow the direct line of approach.

Halts and fire were prolonged as much as was necessary. At 600, 500, or 400 yards there usually occurred an enforced halt, more or less lengthy, with a sustained fusillade. A thick firing line was built up there, movement resumed as soon as possible, and then the assault. Sometimes the assault succeeded; more often it failed, or even was not attempted, the attackers having become exhausted.

Both British and Japanese tried to use night as a help in their attacks, and it is a remarkable thing that we find in their use of darkness the same difference as in their use of artillery. The British tried to use darkness, as they did guns, before their attacks; the Japanese essentially had recourse to it for the last phase of the attack. At Modder River and at Magersfontein the British at dawn got to about 600 to 700 yards of the enemy in the belief that they would surprise him; but as they have not covered themselves with reconnoitring patrols or scouts it is they who are surprised by the crushing outbursts of Boer fire. The absence of scouts and lack of precaution pushed to an extreme degree do not admit of a judgment being formed on the value of this mode of action, which, after all, did get a thick line forward to effective range without moral or material wastage.

The Japanese sometimes did the same; without obtaining a surprise effect, they at least had the gain that the defender's fire was not so deadly as in broad daylight. In this way they got to 300 yards of the Russian trenches and at once dug themselves in. When

day came, they opened the fire fight in conditions of quasi-equality with the Russians.

Usually the Japanese operated by night, not to begin but to finish the attack. Once or twice they even succeeded in doing both in the same night. In any case their night attacks were not carried out according to the methods hitherto extolled. They had not the character of small "coups de main," but were great operations undertaken by whole divisions.

They admitted of infinite precautions; minute reconnaissances; numerous itineraries laid down in the greatest detail; patrols preceding the companies; pre-arranged signals; and innumerable means of maintaining intercommunication. Usually one is advised to use close formations, such as company columns, for night attacks. The Japanese on the contrary deployed their first-line companies into single rank, only keeping the reserves in columns.

(c) Infantry—the Defence

Both the wars in the Transvaal and Manchuria show this characteristic: that one of the two adversaries remains pretty constantly on the defensive. They therefore admit of our studying the defensive fight fairly completely.

The Boers astonished the world by the small depth of their lines. Not being numerous they had to choose between two solutions: occupy extremely narrow fronts with the depth normally admitted heretofore among European armies, or else hold extended fronts in small depth. Trusting in the accuracy and rapidity of their fire, they adopted the second solution and they were justified by events. At Modder River they had

3,000 men on a front of 7 kilometres ; at Magersfontein 5,000 men on 10 kilometres ; at Colenso 4,000 to 5,000 men on 12 kilometres, etc.—that is, one man for 2 or 3 yards of front. These fronts could not be pierced anywhere.

The Russians, with a much greater depth, did not offer to the assailant a greater resistance. Perhaps they shot less well ; but undoubtedly their exaggerated depth did more to hamper the effect of their fire than it did to increase its volume.

Boers and Russians entrenched themselves with care on their positions ; the Boers did so more skilfully, with fire trenches of bottle-shaped¹ profile, which sheltered them from shrapnel. It is quite certain that but for the trenches in which they sheltered from the artillery projectiles while waiting for the time to fire, neither would have been in any condition to offer the assailants the prolonged resistance they did.

Wire entanglements in each case rendered very great service to the defence.

The Boers, furnished with admirable intelligence, and kept well informed by scouts, showed themselves very superior to the Russians in obtaining information, and in scouting. The latter were often surprised by the Japanese night attacks.

All things considered, in the frontal fight the attack has rarely been able to get the better of the defence. In the Transvaal, the British, even when their formations had become more rational, never succeeded in beating down the Boer resistance otherwise than by manœuvre. In the first part of the war, not only did

¹ That is to say, wider at the bottom than at the top, which was made possible by the exceptional stiffness of the soil.

they not take the enemy's positions but they were driven to retreat.

The Japanese, naturally, obtained very superior results. They always got up to assaulting distance, and, although the defender usually had the advantage of numbers, they threatened him so sternly, and held him fast so firmly, that the Russians were never able to withdraw a man from their first line. The Boers, on the contrary, who never had any reserve, were able to counter the turning manœuvres of the British by making drafts on their firing line, which was not kept busy enough by the enemy.

It is stated that the Japanese did succeed in frontal attack. This point, however, is not yet sufficiently well established. Whenever we have been able to verify this statement, we have found that the evacuation of the trenches had been determined on and almost completed before the assault in order to avoid some threat of envelopment. It also happened that the positions attacked, although situated on the front of the Russian army, were not part of a continuous line, but were sufficiently isolated to offer flanks to the attack.

Moreover, taking the great battles in Manchuria as a whole, it seems that their victory is decided, not by a success on the front, but by a turning or enveloping movement. As in 1870, fronts seem to have been inviolable.

CHAPTER III

THE MODERN COMBAT

§ I. PRELIMINARIES OF THE MODERN COMBAT

WE have passed in review the various forms which the combat assumed down to the wars in the Transvaal and Manchuria. It remains for us to study in rather more detail what the modern combat may be. Our data being borrowed for the most part from the two last wars, some of the observations which have already figured in the preceding chapters will reappear.

The preliminaries of the combat, which two centuries ago were non-existent and which amounted to very little even a hundred years ago, have developed considerably since long-range weapons and smokeless powder have been adopted. When Frederick II. drew near a hostile army it was enough for him to have it kept under observation by a few hussars; he examined it personally with the greatest ease, and when finally the troops marched to the encounter they showed themselves at distances which were beyond the range of weapons.

Later, in the wars of the Revolution and the Empire, generals could still see the enemy's army either wholly or in part. Observation was, however, rendered a little more difficult than in the days of Frederick by

the use which was made of cover and of *points d'appui*, and by the distribution of armies over a wider area. When the armies attacked each other, the skirmishers opened the fight, but at so short a range that the troops of both sides could see each other long before they began firing.

In 1870 it became more difficult to locate precisely the enemy's position. The cavalry had to explore the approaches, pushing on at each point until they were fired upon. When the actual fight began, the guns and the skirmishers opened fire without there being occasion for other preliminaries.

Long-range weapons and smokeless powder oblige armies to observe greater formality. When the cavalry, received by rifle shots, is obliged to stop, it as yet knows nothing about the main body of the enemy's troops; it does not even know whether behind the outposts which stop it there are big detachments, or whether it is merely up against a screen. It is necessary that infantry reconnaissances should come into play, probing the enemy's posts, and trying to pierce through them. Efforts are made to find the extremities of the hostile front. In the case of armies which are small in number, as they were in the Transvaal war, these efforts may succeed, but with the enormous armies which obligatory service provides it is necessary to reconnoitre on a front of 200 miles or more, and one does not succeed even then. It is necessary to attack before knowing what one will meet except from the reports of spies and balloons. The situation is no longer the same as that in which the soldiers of Frederick found themselves, for they saw the whole of the enemy's army long before attack-

ing it. At length the enemy's posts are dislodged ; the cannon of both sides speaks, the infantry advances. It is obliged to assume fighting formation three or four miles away from the supposed position of the enemy's artillery. Not only do we know that these guns have an effective range of 5,500 yards, but we also know that the heaviest losses inflicted on infantry by artillery have been effected at long ranges when the companies still thought it safe to march in close order.

From this moment it is no longer possible to advance over the exposed zone except in skirmishing order. Frontal reconnaissance goes on ; it only ceases with the assault. The ground can only be put to good use if it has been reconnoitred beforehand, say the German Infantry Regulations (305). Patrols of scouts search the ground, studying the approaches covered from view of the enemy, discovering his ambuscades, and reporting the exact position of his posts and firing line. During the last phase, some scouts still crawl forward in front of the line, reconnoitring every detail of the ground, and report the position of accessory defences.

This business of reconnoitring, these gropings which begin several miles from the enemy's position, last for long hours, sometimes even for days. It is the first act of prolonged battles such as Liao Yang and Mukden. The example of the English in the Transvaal shows how indispensable is this phase of preparation.

§ 2. GENERAL PRINCIPLES OF THE COMBAT

The object of the combat is to destroy that part of the enemy's forces which is in front of one. This result

is never arrived at without a pursuit immediately following on the fight. It is in retreat that the breaking-up of the enemy and his demoralisation are effected. It is a question of bringing about this retreat, this breaking up, this demoralisation, by dislodging the enemy from the position he is occupying. One has to make him feel the force of a material, mental, and moral superiority which will shake his confidence.

“ The fact of obliging an enemy to give up the ground he is occupying is the only certain sign of success. To conquer is to advance.”¹

It is only infantry that can dislodge the enemy. Cavalry does not charge under fire from modern weapons, and artillery has other work. The whole fight should, therefore, be conducted with a view to assisting the advance of the infantry up to the hostile position. It is not likely that an adversary, even though in small numbers and of quite ordinary quality, would evacuate the position he occupies until he is hunted out of it by the butt or the bayonet. Fire will often oblige him to hide himself, but not to clear out. We must, therefore, anticipate that the fight will end in an assault or in the menace of an assault pushed almost home. It is the final act of the fight, the climax, but it is not the most important act. As we have already seen in the battles of earlier days, the mere frontal fight with the *arme blanche* resulted in nothing.

Let us suppose the impossible ; let us assume that modern infantry succeeds in avoiding the fire fight

¹ Comte de Grandmaison, “ Dressage de l'Infanterie en vue du Combat offensif,” p. 5.

and arrives near enough to its adversary to charge, that will not be a sufficient reason to anticipate that it will drive that adversary back. It must not only obtain contact with the enemy, but it must then possess a powerful element of superiority. This can only be acquired by fire, which, since the sixteenth century, has alone made it possible for the offensive to have some chance of success in a frontal attack. At Marignan and Pavia fire tore the heart out of the masses of the enemy and allowed the infantry to throw itself into the gap. At Fontenoy the English infantry succeeded by its fire superiority in making a breach in the French lines, but when it tried to penetrate *en masse* it was in its turn destroyed by fire and routed. At Friedland the artillery made a breach in the Russian masses.

The assault consummates, but it is fire which produces victory, when it is not due to some extraneous cause. "The offensive consists in bringing the fire nearer and nearer to the enemy right up to the shortest ranges. The bayonet attack confirms the victory gained over the enemy."¹ Thus in the modern fight it is a question of bringing the infantry to assaulting distance, but it must not be thought that this should be done by avoiding the fire fight. The advance of the infantry has for its object as much to bring it to within good rifle range of its adversary as to bring it within good assaulting distance.

Fire has not only for its aim to assist the advance ; though without it the advance would only end in a check. Advance and fire support each other reciprocally as all historical examples demonstrate. Those

¹ German Infantry Regulations.

who count on dislodging the enemy by fire alone are greatly mistaken, and it is no less serious a mistake to wish to assault unbroken infantry with the bayonet or the sabre. History proves that when men have sought for shock action and lost sight of the proper value of fire it has always led them to disaster.

Already a century ago¹ Napoleon said, " Battles to-day are decided by fire and not by shock action."

All this discussion may at first sight seem quite academic ; but it will presently help us to elucidate the complicated problem of infantry attack. This problem has become infinitely difficult because of the conditions imposed by the efficiency of modern arms. The greater the distance at which the attack begins, the greater the danger that has to be faced and the terror that has to be surmounted ; the more one would like to keep one's men in hand, but on the contrary the more one is obliged to disperse them. In the seventeenth century it was possible to lead a solid army to the attack ; under the First Empire it was still possible to move battalions in columns ; from 1870 on it was a question only of sections, or of half-sections in close order, and now, since quick-firing and smokeless weapons have been adopted, extended order is the only order admissible. It is an obligation we all have to accept. No doubt efforts will be made to maintain close formations as long as possible, that is to say, as long as one can find cover, but as soon as it is necessary to push on over open ground one will be obliged to extend into skirmishing order.

The problem with which we ought first to occupy ourselves is just this : How can one best get a body of

¹ " Correspondance," t. xxxi. p. 464.

troops in open order to advance over exposed ground to the attack of an adversary who is in position? Once this first point has been considered it will be easy to pass on to the attack over ground affording more or less cover, to encounter fights, etc. In placing ourselves at the point of view of the attack we shall at the same time see how the defence should be conducted. Above all, we must convince ourselves that certain conditions are indispensable to the success of a frontal attack on an enemy in position. Such a success, if we are to believe history, is very rare, so rare that a general would be mad to seek deliberately for victory through a frontal attack. But there are cases in which such attacks have succeeded. One cannot regard them as condemned to failure; but one must not imagine, given two bodies of troops facing each other, in every respect equal, the one on the defensive, the other attacking, that the latter will have any chance. It is absolutely certain, as Clausewitz and Moltke say so clearly, that the defender derives a very real superiority from his form of action; he has assured to himself the advantage of position: he is in shelter and aims better and more quietly than his assailant. These advantages are great, and other very great advantages are needed to counterbalance them. If the forces of the assailant are only equal to those of the defender he will not be able to dislodge him.

What elements of superiority may an assailant have?

1. *Numbers*.—These have but little influence. Against a position occupied by troops in no great depth—as, for example, the Boer positions at Modder River, Colenso, etc.—the assailant could never gain the advantage in a frontal fight, even if he had five

times the number of men. His fire would lose in quality what it would gain in intensity.

2. *The amount of artillery.*—This second factor is much more telling, especially if the superiority in artillery is very great and the ground allows of the effective countering of the artillery of the defence, of putting it pretty well out of action. As a general rule it would be very rare on a given front for an assailant to have very superior means at his disposal, and to be able to employ them simultaneously to crush the defence.

3. *Individual worth, moral worth, and technical ability.*—Here at last we find the factors of a very real and very telling superiority. If the defender and the assailant differ notably in moral worth, success is to the more energetic, and this without it being necessary to call in the help of a flank attack.

Technical skill produces the same effects. In an infantry combat the skill of the marksmen increases the effect of the fire tenfold. When this is combined, as is so often the case, with superior moral worth, it assures victory in a frontal fight. Technical superiority in the matter of artillery is even more valuable: of two forces of artillery in all appearance equal, one may be quite useless and the other may exercise a great influence on the infantry fight.

If the artillery of the defence wastes its ammunition by pouring it haphazard over the ground on the pretext of neutralising that ground, while the artillery of the assailant hits hard and true, first the defender's artillery and then his infantry, till the very moment of assault, it will gain a very pronounced and possibly decisive advantage.

Taking all in all, we shall rarely, if ever, find very marked differences in moral qualities and technical skill between European armies. It will be extremely difficult to put superiority of numbers to a good use. The only decisive advantage which the assailant can have is a numerical and qualitative superiority of artillery, and the experience of 1870 proved that this in itself is not enough.

Must we then, in spite of pessimistic conclusions, renounce vigorous attacks and content ourselves with simple demonstrations upon the hostile front? This is no more so to-day than it was two thousand years ago. While we are struggling desperately along the front, while we compel the defender to remain there in strength and resist us with vigour, we hope that the guns will make themselves heard behind him, and that, shattering his courage, they will oblige him to retreat and to take improvised decisions. Then we must be ready to spring upon him so quickly that this last assault seems but the natural consequence of what has gone before, so that to us may be the glory of having carried his positions, and to him the shame of having lost them. Without leaving him time to re-form, let us follow him at once while he is crossing the open spaces where he will neither be able to turn and face us nor preserve his fighting formations. This is why we must at any rate push home the attack as vigorously as if it were certain to succeed. If it is the outflanking movement that is productive of victory, it is the frontal attack that reaps the moral fruits of victory, and it is by prolonging it as a direct pursuit that one obtains great results.

§ 3. FEAR

Ardant du Picq showed how the mechanism of the ancient combat was founded on a perfect knowledge of the human heart, and he asks for modern infantry "some way of fighting which shall be in keeping with its weapons, and with what may be demanded of the physical and moral powers of man."

Prosaic as it may appear, we must first reckon with armament—the material factor—and no argument of the moral order can prevail against it. The experience of wars since 1866 has amply demonstrated that it is impossible to advance in close order under fire.

Moral factors exercise an enormous influence on the fight; it is on them that we must base the details of the method of fighting, and we are about to try to do so. As far as the physical strength of men is concerned, the test to which it is put in the fight is only severe because of the nervous exhaustion which emotion produces; and this brings us back to moral factors again.

Among these the first and unquestionably the most important is fear.

"To risk life at every step for hours together is no fun for the ordinary run of men; also, whatever the foe opposing him may be like, the man in the fight has but one enemy, and that an enemy of which he speaks very reluctantly—*i.e.* fear."¹

Various sentiments, natural qualities, passions, and acquired habits fight against fear, such as native courage, confidence in a leader, patriotism, esprit de corps, discipline, etc. One must also reckon with

¹ Colonel de Grandmaison, p. 3.

everyday feelings such as confidence or discouragement, and with the qualities proper to a race or to a category of men. Fear as it reveals itself in a man fighting is a sentiment or rather a special moral and physical state. There is fear and fear. The handful of old soldiers whom a colonel found on the day of Solferino squatting in a ditch and talking quietly to each other had run away from the fight from fear of death, but they remained in full possession of their faculties : they were not a prey to fear as were those unhappy Germans of whom Fritz Hoenig tells, who were huddled together in the bottom of the Mance ravine during the battle of Gravelotte. These were completely panic-stricken and had lost their heads.

But an acute state of fear is rare, without being quite exceptional. We have only to take count of it in order to reduce the effectives of young soldiers going under fire by a tenth or a fifth.

Among those who stick it out there are some who "retch with fear," as Ardant du Picq says. Sometimes they keep it under to the end and go mad after the battle. But the majority can fight down fear at less cost than this.

The young soldier is moved and anxious from the moment he takes the field. He advances into the unknown, never knowing what is going to happen. He is already uneasy to the point of being liable to panic. A bolting horse, a hare crossing the path, may provoke the beginning of chaos in a body of troops. What might not happen if a shot were fired ?

As they get nearer to the actual fight, anxiety increases. Vigorous and brave young men, who would expose themselves without emotion to certain danger

in peace time to save one of their kind, suffer from apprehension of the fight because they have not the slightest idea what is going to happen. If they suddenly hear rifle shots ahead and are led to the assault against a visible enemy, this painful anxiety suddenly disappears, because there is no longer an unknown; every one knows what is up and will advance with confidence. It is just the same if they immediately engage in a fusillade with a quite visible enemy. These young fellows are for the most part plucky and well-intentioned; as soon as they see the goal, understand what is required of them, and can measure up the danger, they advance boldly enough.

The assault and the hand-to-hand fight are not what frighten a soldier whether he be inexperienced or no. What makes most impression on him is the long-range fire fight because it is still the unknown, an enemy one does not see, projectiles that arrive from Heaven knows where. One cannot struggle with this invisible enemy; the danger is immense and is not to be measured, it drags itself out into long hours, and is accompanied by the most horrible din, which produces a violent reaction on the nervous system.

The trial which to-day awaits the man on the battlefield is terrible in a different way from the trial to which the warrior of antiquity was subjected. Ardant du Picq, a good judge in this matter, definitely says: "Let us look more closely at man in both forms of combat. 'I am strong, adroit, vigorous, skilled, full of coolness and presence of mind: I have good weapons and reliable companions; we see everything clearly, we are alert to take each other's places'—that is what a legionary might say to himself on going to

the fight, and he would charge confidently. To-day, no matter how strong, determined, skilled, courageous I am, I can never say: 'I shall come out of it.' I have no longer to do with men; I do not fear them, but the fatality of cast-iron or lead. Death is in the air, invisible and blind, accompanied by terrifying gusts which cause me to bow my head."

§ 4. THE REMEDIES FOR FEAR

The fear which seizes the combatant on the threshold of the battlefield and grows on him owing to the excess of danger, is not the fear of death only but is a moral and physical state in which uncertainty and apprehension of the unknown play a large part. We may obtain appreciable results if we familiarise the minds of the men with what they are going to see, some considerable time before the action, and above all when the combat is drawing near.

When the combat is drawing near, we shall influence a soldier enormously by setting him an example of calm, by chatting with him unaffectedly, by not avoiding to speak of the incidents that will follow, but by treating them as something expected and normal, if necessary, putting the man at his ease by some joke. The more we can postpone the moment in which the soldier, left to himself, becomes once more silent and uneasy, the less chance will there be of his becoming a prey to fear, and the less time will fear have for tormenting him.

But sooner or later the moment comes when we are obliged to hurl ourselves into danger, to abandon close formations, sections even, and to extend into

skirmishing order. From this moment the soldier is left almost to his own devices.

How shall we give ourselves the best chance of leading him up to the enemy in a state in which he can beat him ?

We ask two things of him—to advance and to shoot. Fear makes him shoot badly and prevents him going forward : it must be got the better of.

Immobility, physical, moral and intellectual stagnation, surrender a man unreservedly to his emotions, whereas movement, work of any kind, tends to deliver him from them. There is every reason to keep the combatant moving, to avoid those halts which are not absolutely imposed by the intensity of the fire, and to force the pace.

One must let the men shoot. "It is," said Ardant du Picq, "the safety-valve of fear," and it must be opened in order to avoid an explosion. To attempt to restrain fire on grounds of discipline is a false step, and vain into the bargain. Volleys and fire by a named number of rounds are but deplorable expedients which only augment the tension of wills fighting against fear, and soon cause the limit of the elasticity of the human machine to be reached.

Let them shoot. To advance we must make our own skirmishers run as the Japanese have set us the example. This is also a remedy against fear. The more rapidly a man moves and the nearer he feels he is getting to the enemy the more does the keenness for the fight develop in him, the more does boldness dominate fear. In his excellent book "*La Garde mobile en 1870*"¹ M. Thiriaux enumerates all the

¹ Brussels, 1909.

circumstances in which our improvised troops showed a courage and a value worthy of seasoned troops, and they are almost always cases in which they have been led forward briskly at a racing pace. Therefore, let them shoot every time they are obliged to halt, push the advance forward, carry it out running, and with the shortest possible pauses.

These pauses are necessary if only to get breath ; running in ploughed fields, together with the emotion that grips the chest, soon makes a soldier out of breath. Besides, the defender may produce a fire so intense that it is absolutely impossible to advance. We must wait till he tires, and fire at him as much as possible in order to disturb his peace of mind. When he fires less rapidly and more badly, we can rise and run on till want of breath and the fusillade impose on us a new halt. The less the pauses are prolonged, the easier it is to make men get up and push forward.

If we cannot surround the young soldier with a large body of seasoned troops the only way to put heart into him is to give him *a support* a little distance in rear. It is on this principle that Napoleon wanted to carry back the third rank of his infantry 20 paces to the rear. This was also the principle of the legion's battle array.

In our days when very attenuated lines are the only formations admissible under fire, we must always have behind the first line other similar lines, of less density perhaps, so that the first may feel itself backed up. And for these lines to fulfil their rôle they must not all go on and melt into the firing line. A propos of this, an excellent officer, who had been through all the wars of the Second Empire and the

war of 1870, says : " Every man should be able to see a little way behind him a body of troops which is following him and backing up his movements. He gets great confidence in this way and will be brave far more readily. In several critical situations I have heard the following reflection in the mouths of the men : 'There is no one behind us.' The words circulated from one to another, anxious heads were turned back, almost inevitably dash faded away. We must make no mistake about it, skirmishers thrown forward know very well that they are called upon to suffer great losses, they are aware of their mission of sacrifice, and they will only accept this sacrifice voluntarily so long as they see it is not useless, and that quite close to them are comrades to help them, to avenge them if they fall, and who at any rate are in a position to profit by their efforts."

The regulations of 1875, which were drawn up by men who had made war all their lives, distinguished between the reinforcements intended to join the firing line, to fill gaps in it, and the supports, which were to remain in rear as long as possible, and which were meant to produce a moral effect on the first line from a distance. All these successive lines, the first as well as the rest, must be widely extended. Comparative isolation is good for the morale of a man from the time he finds himself in the zone of fire. If men are close to each other emotions are transmitted and hyper-excitement is reciprocally induced—this is very bad for the steadiness of the combatant. As Ardant du Picq says : " The marksmen who are farthest away from one another will become less dazed, will see more clearly, will be easier supervised, and will for these

reasons shoot better." If the intervals are large, the man who falls has plenty of room, is seen by a less number of people, and drags no one down in his fall ; the moral impression made on his comrades is slighter, their courage is less shaken.

Even in peace time at target practice men shooting shoulder to shoulder become nervous or excited by contact with their comrades and shoot less deliberately. How then would it be in the field? Except in the case of a few recruits lost in a body of old soldiers, one man's fear transmits itself to all the rest. The slightest movement of fear will put to flight a whole body of men through that contagion of fear to which any crowd is liable through the tremor which a moral shock produces in the nervous system of all the men composing it. To each man his own fear is enough. If alone, he fights against it : he feels a sense of responsibility, an obligation not to be a coward in the eyes of others, an obligation which disappears when he feels that the others are as terrified as he is.

We have seen how the tacticians of the eighteenth century, of the Revolution and the Empire, understood the use of skirmishers ; they wanted them scattered at intervals of " less than fifteen paces." They would have protested against the formation of " thick firing lines of skirmishers." For them it was a contradiction in terms to couple the words together. It was essential that the skirmishers should be spaced out sufficiently to enable them to act as individuals. The Japanese in the Manchurian war at first tried having intervals of less than two paces between the skirmishers. This interval, as military attachés declare, was gradually increased throughout the war. In the last

engagements it was about six paces. Thus they fell back upon the same number of paces extension as in the Transvaal war and the campaigns of 1792 and 1815. Thus all historical examples seem to agree in advising a thin line of skirmishers with intervals of about five or six paces between man and man.

It will be objected that it is to our interest to cover the enemy's lines with a denser fire. To this objection history also gives a definite answer.

Each time that progress in armament has made us long to cover the enemy with a hail of bullets we have tried to form skirmishers in rank entire, then experience has brought us back to the use of widely extended skirmishers, whose shooting we know to be more effective than that of serried ranks—whether dressed or not. That which was true in the days of Pericles, of Montluc, of Napoleon, is also true to-day.

Everything in war is a matter of morale, but morale is primarily open to the impressions of physical phenomena. The fusillade would have no moral effect if it were never deadly. During the last minutes which precede the assault we may be satisfied if we get an intense though ineffective and undisciplined fire with which to stun and terrify the defenders, but we must have shown them first that bullets often kill. We have to obtain a murderous, effective, sustained fire in order to produce both material and moral results. It is through the efficient shooting of the skirmishers that the preparation for the attack is made with a reasonable expenditure of ammunition. In this there is an apparent paradox: will twenty skirmishers on a front of 100 metres produce as great an effect as a hundred men shoulder to shoulder?

This was the great discovery of the eighteenth century, a reaction from the error of the seventeenth century. And we have seen how under the First Empire for men to be considered skirmishers it was not enough for a body of troops to be formed up without dressing; to act as skirmishers it was necessary for them to have large intervals between men and complete independence of action.

Numerous Prussian reports on the battles of Jena and Auerstadt confirm the value of skirmishers' fire and the harmlessness of file firing. Duhesme tells us also of an Austrian battalion which lost but three or four men from the sustained fire of a French battalion at 100 paces, while the firing of a band of skirmishers 300 paces away killed more than thirty in a few minutes.

It is not by thickening lines that one obtains "fire superiority." This expression is employed in a very loose way since the assailant can never in any way get a superiority of infantry fire over the defender. He can only make him feel that he is not sheltered from danger. He produces not a superior fire, but sufficient fire to engender fear.

§ 5. GROUPS

Some officers consider that unity of action is more easily attained if the skirmishers form long continuous lines. Others prefer to divide them up into small semi-independent groups. The teaching of history does not allow us to doubt in this matter. It has always proved impossible to get homogeneous, invertebrate, linear formations to move, to push on. Armies which are really quick at moving to the attack or at

manœuvring have always been divided up. It was so with the Roman legion, and the question was settled when the French tactics of the eighteenth century, the tactics of small columns, superseded the linear tactics of the preceding age.

The vaunted "thick line of skirmishers," that is to say the continuous firing line of men shoulder to shoulder which it was desired to impose on us fifteen years ago, was still a form of the linear order. It had the same faults as had the line of battle of the eighteenth and nineteenth centuries. The war of 1870, if we take the trouble to examine it, affords us some very striking illustrations of this point. Read the remarkable studies of Lieutenant Tournés¹ on various episodes of the battle of Froeschwiller, and you will see how great was the activity of the Prussian infantry when led forward by *sections*. The lieutenants played their part with initiative, with dash, and their example was valuable because it was displayed to a small number of men.

Then, on the other hand, let us go back to the battles round Metz.² Without mentioning those French regiments which, while not lacking in courage, their colonels could not lead forward, we see a similar phenomenon in the Prussian infantry. If the company columns and sections of skirmishers marched and advanced briskly on August 6, it was not at all the same thing on the 18th with the deployed companies. Listen to Fritz Hoenig expounding in his "*Untersuchungen*" the almost insurmountable difficulty that

¹ "L'Attaque du Calvaire—De Gunstett au Niederwald."

² "La Guerre de 1870-71," Metz, vol. ii. par la Section Historique de l'État-Major français.

a captain finds in getting his company on to its feet to advance ; some men follow him, others cannot make up their minds to do so.

In a long line, commanded by a single leader, the men who are unwilling to advance have most influence. In a small company it is otherwise ; the commander leads the best forward, and the rest follow, since they cannot escape his eye or the immediate effect of his action.

Companies of 200 men are too unwieldy for the approach movements in an attack. Skirmishers should be moved by squads or half-sections in view of each other, each group feeling itself supported in flank and in rear. No man under these conditions is liable to the retardatory influence of the body of men around him ; but rather yields to the leader's power of sweeping him on.

Most combatants, as we have said, even though not completely paralysed by fear, are not in a state to reason coolly about their actions. Duty must impose itself, as it were, must appear definitely in some tangible form ; the gunner holds on to his gun, but the infantry man has nothing to rivet himself to except his leader.

As Ardant du Picq says, " Control tends to escape from the hands of the supreme commander into the hands of the junior commanders. The certain and inevitable disorder apparent in a body of men in action increases every day by reason of the moral effect wrought on them by the engines of destruction, till in the midst of the hurly-burly and the flowing backwards and forwards of the firing lines soldiers lose their leaders, and leaders their soldiers.

“Among the troops which are immediately and violently engaged *little groups alone keep together.*

“Nowadays when the fight is scattered the soldier no longer belongs to one, and often he cannot be controlled. Whence the necessity arises . . . of making their immediate leaders thoroughly understand what is wanted, where they are to make for, etc.”

Men will follow a leader whom they see close to them, whose commands they can hear, whose leadership they can feel. They gather round him, and obey him. The whole line may be advanced in good order if these groups are kept distinct ; at certain moments the leaders of larger units may perhaps be able to influence the direction of the groups and combine their movements—a thing that cannot possibly be done with continuous lines.

“It is only the small groups,” says Ardant du Picq, “that can keep together, and then only if they are properly constituted, for then they serve as supports and rallying-points for those men who have lost themselves. By the force of circumstances battles now tend to become more than ever before soldiers’ battles. It ought not to be so—we do not contend that it should be so—it simply is so.”

Thirty years go by and General de Négrier, who most often of all our leaders was under fire and paid the penalty for it in his own person, also recommends the employment of small groups of skirmishers.

“There is one fact which now dominates close-range fighting, and that is the impossibility to a commander of exercising any control over lines that are seriously engaged. The influence even of the officers who advance with these lines is very restricted. It is

hardly possible for them to do more than work upon the three or four men beside them. The fight is in the hands of each fighting man, and never in any epoch has the individual value of the soldier been of greater importance."

Can we fail to be struck by the coincidence between these words and those of Ardant du Picq ?

"The fighting front," General de Négrier concludes, "will no longer consist of a continuous line of men firing, but rather of a certain number of groups or swarms, each one led by a non-commissioned officer. In order to gain ground, the officers and non-commissioned officers, having determined which points to occupy, get their men on to their feet and dash forward to lead them. It is the essentially French tactics of 'Follow me.' We owe many victories to it, and we find that it is no less useful of application in the methods of combat to-day than it has been in the past."

§ 6. THE APPROACH MARCH AND ARTILLERY

The principles according to which the march of infantry on the offensive should be regulated up to the time when it is within effective rifle range or assaulting distance are laid down thus :

"The experience of all wars since 1859 shows that supports, local reserves, and reserves, hasten to push into the first line to ease their nerves by replying in their turn to the enemy's fire. Now the premature coming up into line of all these supports, local reserves, and reserves will, by crowding men into the firing line, result in the suppression of all intervals, and will create in the firing line discomfort, disturbance,

nervousness, unhandiness, inertia—all that we have tried to avoid by an organisation of the attack into successive well-extended lines and into distinct groups.”

We must therefore try with all our strength not to carry forward into the firing line all the lines that follow, any more than we ought always to keep them back, but we should regulate their progress.

By degrees we must push up into the firing line the reinforcements requisite to maintain its density fairly constant; which means that it must be duplicated by a line of barely equal strength, for the total losses in an attack scarcely exceed 50 per cent. Thus we get back approximately to the strength laid down for reinforcements by the 1875 Regulations. The bodies which follow are no longer *renforts* but *soutiens*; their task is to give moral support to the skirmishers by preserving them from all dread of isolation.

These supports, écheloned more or less deeply, should not join the firing line until the moment when the latter, having got to effective range, enters upon a more equal struggle with the defender.

It must be noted, in fact, that at long ranges the defender, under cover, can fire with real effect on the exposed assailant, who for his part, most of the time, does not even see the heads and weapons of his adversaries. At ranges of 1,500 and even 1,000 yards the assailant obtains from his fire the advantage of diminishing his own fear, but not of inflicting appreciable losses on the enemy. Having got to 400 or 300 yards, he will still be in a position of inferiority towards his adversary, but at any rate he will be able to see him, however well covered the latter may be.

The fire of the attacker will then become an impor-

tant factor in the demoralisation and material destruction of the enemy.

And it is not the only one. While the infantry has been deploying, the artillery has collaborated for several hours in preparing the fight; its main task has been to beat down the hostile artillery, to do it as much harm as possible, and incidentally to support some minor or partial attacks by the infantry; finally, when the hostile positions have been well reconnoitred and are clearly defined, when the advance of the infantry compels the defender to show himself in order to fire, the artillery devotes itself principally to shelling the positions of the defence, to hitting the defender, or at any rate to forcing him under cover, and to *blinding him by the smoke of its projectiles.*

To induce and maintain the demoralisation of the enemy it is essential that the artillery should not cease fire, and that a slow rate of fire should always threaten the hostile skirmishers. At rare intervals, sudden and violent bursts of fire will produce the most terrible effect and will enable the infantry to make effectual progress.

§ 7. THE LAST PHASE

Finally, the first line of infantry has reached the zone from which it can see the defender sufficiently clearly to reply effectively to his fire. Usually, when it enters this zone, the fire of the defence becomes so violent that it is literally unbearable, and it is necessary to lie down and take cover to reply to it until the enemy, either on account of the effect of our fire or through mere lassitude, ceases to shoot so effectively. One can then make a rush forward, then the same causes reproduce the same effects.

Usually the defender's fire compels a long halt in the zone of effective fire. It is during this pause that the assailant will be able to inflict material loss on the enemy and shake his morale—in a word begin the preparation of the assault.

But one need hardly say that if the fire of the defence is never sufficiently effective to make the assailant stop, the latter will continue his advance. If it is true that attack by fire is an indispensable factor in success, on the other hand the fact that the defender is unable to produce an effective fire gives one so poor an idea of the means at his disposal, his numbers, and his energy, that one can proceed to close with him as quickly as possible. Deliberately to take up a *main fire position* would be purposeless.

The behaviour of the defender will determine the distance at which the assailant will believe himself able to cease fire and to charge with the bayonet. One has seen this distance come down as low as 20 or 30 yards; it is more usually 50 yards; it can rise to as much as 200 or 300 yards. Charges from a distance of 300 yards have sometimes succeeded just as assaults from 20 or 30 yards have sometimes failed.

What happens, what ought to happen, between the time when the skirmishing lines, still very attenuated, enter the zone of effective fire and the time for the assault?

The groups continue their advance by rushes led by their group commanders. These leaders retain the same independence; but they have to struggle against growing emotions and increasing difficulties.

“All the attacking troops,” say the German Infantry Regulations (327 and 336), “must have the resolute

determination to push on continually and pass their neighbours.

“It is the duty of every body of troops to profit by every opportunity to gain ground.

“It will happen that certain units which have been favoured by the ground advance faster than others ; it would be wrong to stop them.”

General de Négrier said the same when he wrote : “Every swarm of skirmishers must try to penetrate the enemy's line by all possible means, without regulating its movements by those of its neighbours, and above all without waiting for them. One must in fact remember that under a fairly brisk rifle fire, if the swarms wait to go on until their neighbours have facilitated their advance, and these neighbours reason in the same way, the whole line of battle stands still.”

The success of a Japanese attack has often been decided by the initiative of some one officer who, ever on the alert, has thought he perceived in the enemy some indication of weakening or some tendency to weaken, and has at once dashed in with his men.¹

It is from the first line, when it is in close contact with the enemy, that the signal for the assault starts. It alone can gauge the situation and the enemy's morale, and feel that the time has come.

The Regulations have at last given official sanction to this truth :

“When the first line has the feeling that the time for decisive action has come it must not hesitate to charge. It warns the fractions in rear by signal. These collect together and rush forward.” (German Regulations, 338.)

¹ “British Officers' Reports,” vol. ii. p. 519.

Moreover, a commander, of whatever rank, who attempted to give the signal for the attack from the rear, would cover himself with shame and ridicule.

Between the time when the attenuated lines penetrate into the zone of effective fire and the time when the assaulting troops burst out of it a transformation has been produced. One does not charge with a widely extended skirmishing line, but with a thick line. The successive lines have come forward and become amalgamated with the first line during the period of effective fire. This has not made its fire more deadly, for it has lost in quality what it has gained in intensity; this accumulation of men in the first line does not give fire superiority, but a regular storm of fire bursts on the hostile position: the whistling of bullets, however badly aimed they may be, reacts vividly on the morale of the defenders, already shaken by long hours of fight, and moreover, suffering appreciable material losses.

Undoubtedly both sides will remain long in this condition; fear goes on increasing in the one as in the other, but the attacker has on his side the feeling of having already overcome so many dangers that success now seems to him probable.

He draws near slowly by rushes more or less short, followed by interminable pauses. The more he advances, the more deafening does the fire become. The successive lines amalgamate in a thick firing line, which shoots all the time, firing to calm itself and to make a noise.

Sooner or later the attempt is made to storm. It may succeed; it may fail. More often when the time for the assault is imminent distant events have had

their effect on the defender, have shaken him, and have determined him to retreat.

The attacker, who, with watchful eye and alert mind, never ceases to keep him under observation, notes the symptoms of discouragement, the undulation and thinning of the hostile lines, the slackening and growing wildness of the fire. Suddenly some subaltern springs forward carrying his handful with him, followed by neighbouring groups and by the lines which have remained in rear; the bugles sound the charge. Perhaps the enemy will slip away before he is closed with; perhaps he will be beaten then and there; perhaps his fire will stop the attacker. More often it will require reiterated attempts to give victory in the end.

It will be seen that the most critical phase for the attacking infantry is the last one; it is to get over the last 300 or 200 yards that artillery support is necessary to it. But it is just then that the old regulations withdraw the co-operation of guns from the sister arm. In future we shall act quite otherwise, and percussion fire on the line of the enemy's infantry will be continued without interruption up to the actual moment of storming. It will reach the defender, deafen him, shake him, and above all plunge him in a cloud of smoke in which he will no longer be able to use his weapons. It will be the best protection for the assault.

§ 8. ATTACK AND DEFENCE—THE ENCOUNTER FIGHT

From the line of conduct pursued by the assailant we shall deduce easily that which the defender should adopt. At long range his fire is effective, while that

of the assailant is not so. He too will have formed a firing line of very slight density, and his men, shooting collectedly and aiming carefully, will succeed in inflicting serious losses upon their already visible enemy. The artillery of the defence can act, but the effects of its distant fire will be very slight on lines of widely extended skirmishers lying down.

When these get to good useful rifle range the defence has but little interest in increasing the density of its first line, since it has its reserves at call and is seeking only for fire effect. It is only in the last phase, when the rifles of both sides are completely out of all control and fire "into the blue," that more men must be put into line to produce by intensity of fire the effect which can no longer be obtained by its accuracy.

The guns of the defence will act effectively at that decisive moment when the assailant begins to thicken his first line with a view to pushing the attack home. Guns hitherto silent can suddenly unmask, and their fire with high explosive shell will inflict serious losses on the thick line of the attacker up to the time when the artillery of the attack is able to locate them and to fire on these last supports of the defence. This interval may suffice to break the dash of the assailant.

As regards infantry it is to the interest of both sides not to put into the first line, up to and including the moment of closing with one another, more men than are absolutely necessary, say $1\frac{1}{2}$ to 2 men per yard. Denser lines have neither more available material force nor greater moral effect. Skirmishers shoot without fear and with some satisfaction at troops in thick formations. The defender will, on the contrary, be

impressed by the sight of successive lines following one another right up to the limit of the horizon. The first one repulsed, another surges up and takes up the fight again, then another and another, and still they come on! There are too many of them.

The attacker, for his part, has felt his confidence grow as he gets on, as he overcomes dangers, as he finds himself nearer to his goal; but his nervous tension is such that all his energy may collapse and fail him after a last effort. Japanese troops were sometimes seen to fall exhausted on the edge of the Russian trenches to which their heroism had carried them. If the assailant, having reached the hostile line with the conviction that all is over, that at last he is victorious, suddenly sees fresh troops spring from the ground who counter-attack him vigorously, he will be in no condition to stand up against this disillusionment at the very moment when he has relaxed his overstrained nerves.

"All the attacks without depth which we note in recent wars have failed," says Comte de Grandmaison; and what is true of the attack is no less so of the defence. In the infantry combat, as in the cavalry combat, victory is to him who throws in the last fresh troops.

Such is pretty well the physiognomy of the modern fight. Normally one engages *in first line* $1\frac{1}{2}$ to 2 men per running metre of front: the assailant sometimes uses 6, 8, 10 men per metre, *including reserves*, to reiterate his attacks, for he must never let go.

The losses suffered are extremely variable according to the energy displayed; sometimes they fall to 5 or 6 per cent.; they also rise to 40 or 50 per cent., and

may even rise far beyond these figures, as was the case at certain points at Froeschwiller, at Mars-la-Tour, and at Saint-Privat.

The artillery may expend as much as 400 rounds per gun, but this is a high maximum; the infantry fires from 200 to 300 rounds per man when the attack is conducted with all the energy necessary for success and when it encounters a resistance no less vigorous.

One can state no average time for the duration of the fight; this depends on the fighting worth of the combatants, and the support which one side and the other find in the ground. The assailant gets within 600 or 700 yards of the defender fairly quickly; it takes him several hours, at least two or three hours, to advance as far as 200 or 300 yards. Having got there, he may sometimes assault without waiting any longer; at other times he will find himself stuck fast for an indefinite period.

All the advantages which we have attributed to the defence only exist if the defender has entrenched himself seriously. If he has not established his firing line in deep fire trenches, and sheltered his supports in cover trenches joined to the former by communicating trenches, he cannot maintain in the last phase of the fight the superiority he had at the outset. If he has placed himself on a crest-line, it is he who offers targets more visible than does his adversary.

Napoleon states authoritatively that the defence is admissible only in a very good and strongly fortified position. But then it is almost impossible to debouch from it.

The offensive imposes itself on him who would conquer.

If both adversaries are imbued with this truth, they arrive, naturally, at the encounter fight.

In it the task of the commander is more arduous ; dispositions have to be taken more hastily and in almost complete ignorance of the situation in which the enemy finds himself. Neither the one nor the other of the two adversaries has the advantages which an entrenched position affords ; the encounter usually takes place on ground which has not been selected because it offers a very clear field of fire ; cover is consequently more plentiful ; skirmishers and even small columns progress more easily. The two sides find themselves with effective rifle range pretty quickly, and the infantry fight reduces itself almost to its last phase.

The artillery, having to come out of the columns to deploy and having to avoid coming into action in fractions, will perhaps not support the infantry from the first moment ; this will still further facilitate the advance of the skirmishers on one side and the other.

The combat at a given point of the battlefield will turn more or less quickly to the advantage of one of the adversaries. The other will be hustled from the outset, or else he will know how to organise, behind his front line, a position in which he will maintain the struggle ; the fight will then assume the same character as in the attack and the defence of an entrenched position.

CONCLUSION

ALTHOUGH the normal formations, regulated for to an extreme degree, which were in vogue from 1875 to 1900, have disappeared from all the Training Manuals, one might still believe that the secret of success lies in the form of dispositions adopted. We think it our duty to react once more against this temptation by recalling to mind certain essential features which, in spite of their importance, may have remained unperceived.

Of course there are good dispositions and bad dispositions, there is a science of the fight, there are methods to avoid and methods to be recommended. The science called *tactics* has indeed its justification; but it is vain if courage, keenness, and the will to conquer do not inspire the combatants.

It is above all among the officers and the junior non-commissioned officers that such qualities are indispensable. Formerly it only required one or two energetic men to carry forward a battalion. To-day it is necessary to have along the whole line of battle leaders full of keenness, of untiring keenness, who ceaselessly carry forward every part of those long, cumbrous, heavy lines, which are so adherent to the ground.

Let us call to mind the attacks of 1859, and those of the Prussians at Woerth and Vionville; it is the

lieutenant who leads on his section with him ; it is the lieutenant again who leads on the Japanese group to the assault of the Russian lines.

One must not reckon therefore that certain given tactical methods, the bringing up of supports and reinforcements from the rear at the desired time, will mechanically give one victory. Of course, good dispositions are necessary, but troops are not led forward to the charge, are not led on to victory, except by men of stout heart who *head the movement*, inspiring the remainder by example and by a strange force which emanates from them and overawes both friends and foes.

No more to-morrow than of old shall we win without courage ; we shall win always thanks to courage ; and if it is not the only mainspring of victory, it remains ever the most essential thing, that which we can never do without.

PART II
THE BATTLE

CHAPTER I

BEFORE NAPOLEON

§ I. THE BATTLE IN OLD TIMES

Up to now we have studied what may be called the elementary combat, an aspect of the fight or battle, the struggle between two bodies of troops which are framed to right and left by other troops, and are opposed to one another front to front. In it we have seen in broad outline the manner of fighting which armament has imposed in different epochs.

A battle or a fight can be resolved almost completely into elementary combats such as we have just seen described ; these latter usually compose the main part of it ; at various points of the front are found battalions, regiments, brigades, engaged with other units which are facing them. But that is by no manner of means the whole battle or the whole fight. Without mentioning the cavalry actions of which the effect, though sometimes transitory, may become most important, it is not possible to *resolve* the entire struggle between two armies into elementary combats fought out on a rectilinear front. At various points on the battlefield there are salients and *points d'appui* whose dimensions do not equal, or hardly exceed, the depth in which a body of troops is arrayed for the fight.

Commanders of every rank endeavour ceaselessly to manœuvre, and sometimes they succeed: they try to combine a flank attack with a frontal attack in order to envelop a salient on which they obtain the enormous advantage of concentric fire. The Commander-in-Chief seeks to outflank or to turn a wing to find the undefended, or but weakly defended, space by which he may reach or threaten closely the enemy's line of retreat. And there are partial attacks which meet with but little opposition and are conducted accordingly.

That is a characteristic common to the battles of every epoch. The frontal fight leads to no solution; it is an attack in flank or in reverse, sometimes carried out by a numerically insignificant body of troops, which procures victory.

In the days of Gustavus Adolphus, of Condé, and of Turenne, the drawing up of the battle array is the same as in the Middle Ages: it is the cavalry on the wings which decides victory, and in the cavalry combat it is by an outflanking movement that success is decided: at Rocroi and at Lens, Condé concerns himself above all with keeping the last squadrons available in order to throw them on to the enemy's flank and turn the *mêlée* into a pursuit.

Up to then infantry could hardly manœuvre on the wings. It could not do so without breaking its lines to detach to one side the body of troops charged with making the flank attack. It would also have been necessary that the units used in these turning movements should be able to manœuvre, to divide, and to change direction rapidly. But one could not leave gaps without running a risk of the enemy throwing

himself into them and taking in flank both segments ; and the ponderousness of the formations in vogue did not admit of their manœuvring.

It is the cavalry alone, thanks to its speed, which can manœuvre on the flanks. It can operate in several separate groups, capable of manœuvring, and runs no risk of the hostile infantry penetrating into its intervals, and turning them into breaches during the few moments necessary for charging.

Towards the end of the seventeenth century infantry fire begins to become sufficiently rapid to admit of sweeping effectively the intervals left in a front. At Fleurus the French infantry carries out a big wheel to follow the manœuvre of the cavalry, but it is still the latter arm which delivers the decisive attack.

§ 2. THE EIGHTEENTH-CENTURY BATTLE

Towards the middle of the eighteenth century all the potentiality of arms is taken advantage of. It is realised that it is safe to leave gaps and irregularities in the front, especially if it is covered with skirmishers.

During the Seven Years' War armies adopt less uniform dispositions, either by battalions being écheled as in the oblique order, or by grouping them at certain vital points while neglecting the others. There is no hesitation about fighting in the most broken ground.

Frederick, profiting by the exceptional training of his troops, makes his infantry manœuvre even on battlefields. Though cavalry does not cease to be for him the arm of the great decisive movements, he subdivides his infantry and produces convergent attacks by which the infantry determines the issue.

Thanks to precision and quickness in movement the Prussian army could move across the battlefield, so as to be brought against one wing of the enemy, and could deploy suddenly without giving the latter time to change his dispositions. Leuthen is the perfect example, *almost typical*, of the Frederician manner; that day the great king succeeded in realising his ideal. The Austrian army, less well drilled than the Prussian, had deployed beforehand. Frederick marched straight on it, but only deployed his advanced guard; the bulk of the army turned to the right without disclosing its purpose, and, moving as if in procession, went and placed itself at right angles to the enemy's left. With the precision of drill of the Prussian infantry one single word of command was enough to form it in line to the left, correctly dressed. Frederick at once proceeded to attack; the battalions moved forward in succession from the right, and thus found themselves in *échelon in oblique order*.

As soon as the danger was seen the Austrians tried to face to the left, but they were unable to form in an orderly manner for lack of skill in manœuvre. They piled themselves up in disorder on too small a space; Frederick, in front of Leuthen, attacked what had been their left flank and had now become their front. He converged on it the fire of his infantry, some battalions of which still further overlapped the enemy to the right; the whole of the artillery was there, enfilading the enemy; his grenadiers were in support; his cavalry came in on the rear of the enemy. It was again the cavalry which said the last word, although almost the whole task had been put through by the fire of infantry and artillery.

If at Leuthen Frederick operated with his forces closely united, he did not hesitate to break their order when, as at Prague and other places, the nature of the ground suggested such a course. At Torgau (November 3, 1760) he ventured on the most daring separation of all, the bulk of the army taking the enemy completely in reverse while Ziethen attacked their front with a detachment.

It was clearly proved, then, towards the middle of the eighteenth century, that armies could fight, not as heretofore, in one single mass, or in one indivisible, even, regular line, but in several distinct bodies. These army corps or divisions usually only left between them such intervals as the range of firearms would prevent the enemy from throwing himself into ; but the example of Torgau shows that sometimes the advantage which may be drawn from wide turning movements outweigh, in the eyes of the general, the dangers of a too complete separation.

This wideness of turning movements is one of the most important consequences entailed by the progress made in weapons. Sufficiently powerful to admit sometimes of breaking the enemy's lines by fire, above all they enhance the effect of flank attacks, and admit of their being made by detachments.

"In an attack, that which procures the greatest and most decisive advantage," said Guibert, "is assuredly to turn, outflank, and close upon the enemy. There is no well-designed and successful attack but such as outflanks that of the enemy, and consequently is produced on a wider front than his."

Fire-effect, which makes turning movements so effective, also admits of their being given a greater scope.

“Our weapons,” said Mauvillon,¹ “to a remarkable extent help undertakings against an army whose flank is not secure. Corps which are sent round can go wide, and separate even to the extreme range of the musket without fearing anything, because the cross-fire of artillery and musketry covers the gap to such an extent that the enemy dare not try to push into it.”

Le Roy de Bosroger advised turning movements with a wide scope, because of the moral effect they have on the enemy. “It sometimes happens,” he says, “that one deliberately detaches a corps whose task depends on the main manœuvres, perhaps to turn the enemy and take him in rear, perhaps to fall on him from some other point, in the middle of the engagement, and, by surprising him, force him to change all his dispositions.”²

And Guibert admitted also that “the army should be so disposed that if one wishes, one may direct a part against the enemy’s flank while one directs the remainder against his front.”

What Guibert, Mauvillon, and Bosroger advocate is briefly what Frederick, by prodigies of skill, succeeded in doing with an antiquated instrument, and which later on was to be carried out more rapidly and more easily with new methods of procedure.

Henceforth French tactics placed at the command of generals the means of manœuvring on battlefields.

Maréchal de Broglie distributes his army into *permanent* divisions (1759). Until the moment to commit them to action had come, he kept them massed in close columns, easy to move. He directed them by

¹ “Essai sur l’influence de la poudre à canon,” 1783.

² Le Roy de Bosroger, “Éléments de la Guerre,” 1773.

the shortest roads to the points where he wished them to fight, he deployed them quickly by the new methods which Comte de Guibert had invented.

“Formerly,” said Guibert, “the movements which formed an army in column or in line of battle were so slow and so complicated that it took whole hours to make a combined movement; one had to form one’s battle array very far from the enemy. Now, or rather from now on, the movements which form troops in column or in line of battle being simple, expeditious, and applicable to all kinds of ground, one will form one’s battle array as late and as near the enemy as possible, because columns are much easier to move about than are lines.”

§ 3. THE BATTLES OF THE REVOLUTION

The following generation established as a custom that which was still the exception in the Seven Years’ War. The divisional principle was definitely admitted in France from the time of Maréchal de Broglie. Having become a national custom, it bore its fruit in the wars of the Revolution.

Dumouriez, who was essentially an adherent of the old school, did not dare to attempt great turning movements, but his army manœuvred according to the principles of Maréchal de Broglie; at Neerwinden he led it forward in eight columns, grouped into three corps. Although he only had 44,000 men, he covered a front double that which Luxembourg held in 1693. His divisions deployed to the front and fought separately, without bothering about any kind of dressing or parade-ground touch. The Commander-in-Chief ensured concerted action by the direction given to the

fight of each division, but did not form any continuous line. Without being piecemeal the action was formed of several minor fights.

At Wattignies, Jourdan's 56,000 men attacked on a front of 12 miles. The Austrians, who applied the same methods, were no less extended, and used in the battle a column brought in from a most distant point (Consolre), which took our right in reverse and almost snatched the victory from us, at the very moment when Jourdan and Carnot had just taken Wattignies.

These divisional movements, this scattering of columns over large areas, was not peculiar to the Army of the North. Brought up in the same school, the French and Austrian generals who operated in Alsace and on the Sarre followed the same principles. The Prussians alone, without absolutely conforming to the methods of Frederick, preserved more cohesion and kept their armies better assembled.

In 1796, at Neresheim, all the faults which the divisional system may cause and all the mistakes to which it may lead were exaggerated by Moreau's clumsiness. Having only 35,000 men in hand, when his army numbered 65,000, he still found occasion to detach Duchesne's division to a distance of over 6 miles to his right, without any idea of common action, without intercommunication. There remained to him 28,000 men on the battlefield, and knowing neither how to dispose them to receive attack, nor how to handle them during the action, he nearly got himself crushed by 24,000 men. His divisional generals succeeded in winning by sheer skill in the details of the fight.

This battle, however badly conducted, shows us that at the time when Bonaparte appeared on the

world's stage, the two leading armies of Europe put their divisions into action separately on a front of 21 miles, the flank divisions at 5 or 6 miles from the main body, each division fighting on its own account, without any general control of the whole. Those generals who had received some military education before the Revolution knew how to allocate their forces, and how to use the bulk of them against the point selected for the attack. The others, Hoche, Jourdan, Moreau especially, and most of the Austrian generals were incapable of making any combination.

We have only looked so far at the "battles" properly called "pitched battles." To realise the error to which the divisional system at first gave rise, one must take into consideration also those groups of actions fought by pretty well independent divisions scattered over whole provinces, such as the affairs which took place in Alsace during the campaign in 1793 along each of the tributaries of the Rhine, the Lauter, and the Moder; the battles of the Ourthe and the Roer in 1794, where the army of the Sambre-et-Meuse scattered itself over 38 miles; such in fact were the actions fought by Moreau in 1796, on the Kinzig and the Rench, from Rastadt to Ettlingen after the passage of the Rhine.

Nothing could well be more opposed to the practice of the preceding generation, to the armies kept ever assembled and always fighting as one single whole; these innumerable actions, to which sometimes the name of "battles" is wrongly given, exemplify well the excesses of the divisional system, in the first flush of reaction against the linear system, and in the hands of unskilled generals.

CHAPTER II

NAPOLEON

§ I. THE NAPOLEONIC BATTLE

(a) *The Flank Attack*

APRIL the 12th, 1796, marks an epoch in the history of war. On that day General Bonaparte, who had been recently nominated to command the army of Italy, gained his first victory.

It was a small engagement, which took place between Montenotte and Monteleghino. Bonaparte attached so little importance to it that he did not direct it in person.

And yet the fight of Montenotte holds a prominent position in military history. It presents for the first time, though on a small scale, the characteristic traits of the great Napoleonic battles. The general takes advantage of the pliability afforded by the divisional system to manœuvre extensively and to prepare a surprise ; but he takes care not to let the divisions act on their own initiative or to employ them on too distant points. At the beginning of their movement they have enough room to make evolutions easily, but they are directed by a single will, and this will causes them to converge on a single point. Argenteau's Austrian corps had attacked the fortifications of Mon-

telegino on the preceding evening. At break of day Rampon and Laharpe sallied out and attacked him frontally with 9,000 men. Masséna, who was with Laharpe at Savona, was not moved in a straight line to the locality of the fight, but 5 miles to the left on the crest of Altare. He had arrived there in the dark, and saw the first shots of Laharpe's division fired at sunrise, and rushed in. He fell on the rear of the Austrians and went ahead of them to Montenotte. Argenteau, confused by so many attacks, tried to form face to them all, and to manœuvre under fire; his battalions, attacked on all sides, whirled round and ran away.

We here find, as we have said, the characteristic traits of the finest Napoleonic battles. And this is so, firstly because of the contrast it shows to the errors of the period immediately preceding, and the employment of the troops in a single action on a front of limited extent. This concentration was not only imposed on the troops engaged at Montenotte. Contrary to the practice of the campaigns of the Sambre-et-Meuse and to those many actions on the Ourthe and the Roer, we here see a whole army assembled a short distance away from the ground where two divisions are engaged, but where the enemy might suddenly unmask much greater strength. "The art of war is composed of invariable principles which have for their chief aim to guarantee the army against the mistakes made by commanders as to the strength of the enemy." These principles, which for some years had been lost to sight, were re-established by Bonaparte, and the first among them is the principle of the concentration of forces.

But everything in war is a balance of seeming contradictions, and the mission of art is to combine in just measure the opposed elements ; for instance we find alongside this principle of the concentration of forces, the principle of their distribution. Bonaparte makes all his troops fight in a limited area, causes their action to converge on a single end, but he allocates to each division a separate movement. The manoeuvre is the result of the combination of these elementary movements. Laharpe and Rampon attack from Montelengino towards Montenotte ; Masséna from Altare on Montenotte.

This distribution, and this combined action, permitted Bonaparte to obey a conviction that was very firmly rooted in his mind :

“ It is by turning the enemy, by attacking his flank, that battles are won.”

Every time that Napoleon was able to turn or out-flank the enemy he did not fail to do so. In order to know what he felt about it, and his way of doing it, we should not only examine the battles in which he succeeded in carrying out a turning movement ¹ of great extent, but every occasion in which he tried to do it, whether the battle took place or no, whether or no the enemy avoided the encounter or shifted the theatre of operations. Four months after Montenotte we see Sérurier's division, at first kept 22 miles to the right of the army, engage in the battle of Castiglione on the enemy's flank.

¹ A turning movement, by means of which a *detached* corps goes to attack the enemy in flank, is to be distinguished from an out-flanking movement, by means of which the extremity of the line of battle wheels round on to the enemy's flank without separating from the central army.

Napoleon tries several times to bring off this manoeuvre again : in 1805, thinking to attack Mack to the south of Ulm, he keeps Soult's corps 18 miles to the left in order to take the enemy in flank ; later, when marching on Vienna, and thinking that Koutou-zoff would offer resistance at St. Pölten, he detaches Davout and sends him by fearful mountain roads some 30 miles to the right, so as to make certain of taking the Russians in rear : but these refuse to accept battle, and Napoleon is only able to overtake them at Hollabrün, where he tries to close on them the pincers formed by the corps coming from Krems and from Vienna.

When the Allies debouched from Austerlitz, Napoleon intended to receive the blow to the east of Brünn, and to hurl Davout's corps, which was arriving from Vienna, upon their flank. The extreme weakness of this corps, which had been reduced to 3,600 men by a forced march of 65 miles, prevented him from carrying out this intention.

The following year at Jena he sends Davout 18 miles to the north in order that he should come down on the flank of the enemy he is about to attack at Weimar.

In the winter campaign of 1807 he tries the same manoeuvre at Bergfried, and succeeds with it at Eylau. He renews it in 1809 at Eckmühl, in 1813 at Bautzen.

When, in the month of August 1813, Schwarzenberg debouched from Bohemia on Dresden, Napoleon first thinks of letting him throw himself against the fortifications covering this town, and of debouching behind his right wing by Pirna. He gives it up because he

does not consider the young troops of Gouvion Saint-Cyr capable of holding Dresden against superior strength.

To sum up, when one studies Napoleon's projects on the eve of a possible battle, one sees him almost always seeking some vast turning movement, an attack levelled full at the enemy's flank by corps called up from 7, 12, 16 miles' distance. This manoeuvre does not always come off; sometimes the enemy steals away, as at St. Pölten; sometimes he heads off the detached corps, as at Jena-Auerstaedt. Napoleon is only able about three times out of four to accomplish his vast turning movement successfully; but it is none the less true that he nearly always attempts it.

(b) Object of the Flank Attack

When he does not succeed in delivering his attack full on the enemy's flank, Napoleon contents himself with an outflanking movement. This is the case at Austerlitz and Jena. He also has recourse to the outflanking movement at Wagram, and at Dresden, where space is lacking for a more ample manoeuvre; on the Moskowa (Borodino), and at Wachau (the first day of Leipzig), where he did not dare risk a combined attack.

The stronger morally and physically the enemy is the more does the turning movement of great extent by detached corps offer danger. We have seen it when in his march on Bautzen Ney's corps was attacked by the Allies and narrowly escaped a very grave reverse. In his instructions to Davout

of November 5, 1805, in view of the hoped-for battle at St. Pölten, Napoleon clearly defined the distinction that he makes between an attack on the flank and a simple outflanking attack. "Little outflanking is to be done" if all the Russian armies have united; but on the contrary "they are to be attacked in rear" if Koutouzoff has received no reinforcements.

On the whole whether he employs a turning movement or an outflanking movement Napoleon uses them to obtain the same results. It is true that at Austerlitz and at Dresden the outflanking movements only co-operate with the frontal attack in pushing the enemy back, that at Eckmühl the two chief masses of the French army crushed the army of the Archduke as in a vice; but as a rule the Napoleonic battle is more complicated, more intelligently organised; the attack on the enemy's flank has for its object not to produce an immediate decision, but to provoke it.¹ It should only be thrown forward when the enemy has been led to expend his strength and to engage his reserves along the front. It then obliges him to break his order of battle so as to oppose the troops of the outflanking attack; that is the beginning of disorganisation, and to it must be added the moral disturbance caused by the noise of guns behind the front. Generals and soldiers alike are moved by that.

Then the frontal attack should be made; it takes advantage of this disorganisation, of this disturbance,

¹ This point has been brought to light and enlarged upon by Colonel Camon: "La Bataille napoléonienne," 1899, and "La Guerre napoléonienne: les batailles," 1909.

to hunt the enemy from his positions, and if possible to pass on straightway to his pursuit.

Napoleon expressed himself so frequently and so clearly on this point that doubt is no longer permissible upon it. From Castiglione to Bautzen we have, as far as each battle goes, the authoritative text. At Castiglione Napoleon at first gives way before the enemy ; but suddenly a cannon shot is heard behind Wurmser's left. The Austrians begin to get agitated. Bonaparte rushes towards Joubert : " Do you see Sérurier attacking directly he has arrived ? You ought to be engaged already ; go with your chasseurs and force the enemy's centre."

In this first experiment, however, the attack was delivered too soon. Napoleon afterwards, with his riper experience, seized with greater precision the decisive moment in which the enemy was becoming disorganised. The logical succession of events is brought clearly to light by the souvenirs of Marbot on the battle of Wagram, by the bulletins of the Grand Army for Lützen, Bautzen, and Leipzig : one sees from afar the dust of the columns, the smoke of the batteries that attack the flanks of the enemy, one sees his reserves hurrying up and deploying. The Emperor, who patiently observed all the phases of the struggle, " judges that the moment to decide the battle is clearly indicated." He sends orders to all his marshals to attack, he pushes Drouet forward on to the decisive point with a large battery of 80, 100, 150 guns, Oudinot or Mortier with the Young Guard.

The unity of procedure is shown in the four great battles of which we speak, as well as in that of Castiglione, which Joubert so clearly describes.

Here, it seems, is Napoleon's ideal manœuvre :

1. By the frontal combat to oblige the enemy to engage all his troops.
2. Then to deliver an attack on his flank, and when his order of battle has been disorganised in order to meet it—
3. To attack thoroughly with all forces available, and, above all, with a mass of artillery.

In practice this is an ideal which Napoleon always pursued and hardly ever attained. At Castiglione he attacks as soon as he hears Sérurier's guns, and this without having forced Wurmser to engage all his reserves. Wurmser is able to form front on both sides, and the victory is not overwhelming.

At Eylau the Russians take the initiative. Our forces are used up sooner than theirs because of the disaster that overtook Augereau's corps. They hold their own against Davout's outflanking attack, and it is only the appearance of Ney as night draws in that decides them not to resume the fight on the morrow.

At Lützen the outflanking movements are produced slowly and are but little accentuated ; Eugène holds Lauriston back ; the preparatory combat on the front is prolonged to the point of using up all the forces of Ney, Marmont, and the Guard.

At Bautzen the Prussians got wind of Ney's movement ; it produced neither surprise nor disorganisation. The method begins to lose in value by dint of being used.

(c) Particular Cases

In the series of Napoleonic battles there are some cases of central attacks: Rivoli, Marengo, Friedland, Ligny. They come in time to remind us that there is no general rule in war, and that Napoleon, though he saw in turning movements the most natural way of obtaining victory, knew how to achieve it otherwise when circumstances prevented him from succeeding by his usual methods.

But however that may be, do not let us lose sight of the fact that in all these battles the enemy was broken up by fire, and not by the shock action of columns in depth.

It happened several times and for very different motives that Napoleon fought a double battle, that is to say, a battle composed of two clearly distinct actions.

At Austerlitz the Allies transported the bulk of their forces to the south in order to cut off the French from retreating upon Vienna, but three leagues from there they left Bagration, whose right rested on the mountains of Moravia. Napoleon cannot outflank Bagration on the north at the same time as the whole of the rest of the Allied troops: there is nothing for him to do save make him the object of a separate fight by Lannes and Murat, while he outflanks and repels the mass of the Austro-Russian troops to the south.

The following year Davout, to whom it was assigned to turn the Prussian left behind Jena, encountered half the enemy's forces and gave them separate battle at Auerstaedt while the Emperor fought at Jena. In both cases the battle ended in a double victory, so that

no difficulties arose out of it, no recall of troops from one side to the other. It is not the same thing at Leipzig and at Ligny.

On October 16, 1813, Napoleon, to the south of Leipzig, won the partial victory of Wachau; in order to make it more decisive he wanted one or two more army corps at his disposal, but the instructions given to Ney and Marmont were such that these marshals had engaged all their forces with Blücher to the north of Leipzig. Napoleon obtained but weak reinforcements, which, moreover, arrived too late.

And again, on June 16, 1815, when he fought Blücher at Ligny, he meant to make his victory decisive by causing Drouet d'Erlon's corps to co-operate; but the latter was under the orders of Marshal Ney, who gave battle separately at Quatre Bras, and between order and counter-order D'Erlon ended by taking no part in either action.

These few examples prove how, a century ago, Napoleon himself met with insurmountable difficulties in trying to modify the distribution of forces between two armies fighting at the same time, back to back, at a very short distance from each other.

As we see, he manœuvred successfully from a central position between two adversaries when the space that separated them was large enough, but it was by no means the same when everything happened within a narrow compass, and amidst the emotions of a battlefield. A central mass can be played with in great operations, it must not be counted upon in battle. The advantages of the central position disappear, while those of enveloping formations become visibly enhanced. The progress in matters of communication

accomplished during the last century has only enhanced these last, by causing the unfavourable factor in the enveloping attack to be eliminated, *i.e.* the difficulty of communication at great distances.

(d) *Initial Dispositions*

To sum up, Napoleon set before himself an ideal mode of attack. Circumstances rarely allowed him to realise it altogether ; but he always finds means of improvising a solution which corresponds to the circumstances.

The initial dispositions he takes are at the same time those which best suit his favourite method of procedure and those which lend themselves best to improvised manœuvres, to sudden changes of front, etc. These dispositions are, moreover, of a quite amazing simplicity : they consist of engaging as few troops as possible, letting them be used up completely without sending them any reinforcements, and holding the main body of troops well concentrated, " like a battalion in the hands of a good major " behind the wing where the decision is to be sought.

The army corps and the divisions are close together ; each battalion forms a small compact column of 30 by 50 paces, and the battalions of each division are grouped in order according to the ground and situation. The great units thus massed are at the Emperor's disposition, and every moment he directs them as he wishes to such or such a point of the battlefield. Small columns move rapidly across fields, at such large intervals that their freedom of movement and their prompt deployment are assured.

See at Austerlitz the divisions of St. Hilaire and

Vandamme advancing to the plateau of Pratzen: the brigades thread their way through the valleys, and the battalions separate and deploy when they get within firing range.

Let us above all remember the movements of Macdonald at Wagram. With his corps also formed in a group of small columns he is sent by the Emperor to the right to support the outflanking movement of Davout. Suddenly the enemy rushes our centre; the Austrian cavalry comes up. The Emperor barely has time to order Macdonald to advance by the left flank with his whole army corps: the small columns turn without difficulty instantaneously in the new direction. Already the Austrian cavalry is appearing, ready to charge, but immediately the whole of Macdonald's army corps is transformed into a vast square; the battalions of the centre deploy in the wink of an eye, those of the wings close in to cover the flanks.

Such are the supple formations, the rapid evolutions, which the tactics of those days place at Napoleon's disposal, and the use he makes of them.

Before the battle the main body is closely massed on the side on which it is proposed to take the offensive. The Emperor engages as few troops as possible, leaving the troops of the first line to use up all their bullets and all their energy. The promptitude of outflanking manœuvres admits of the frontal combat being sustained for sufficiently long with a small force.

It is the number of available and easily moved troops that gives the means of facing all circumstances squarely. Marching out of Jena, Napoleon soon ascertains that neither Davout nor Bernadotte can

arrive in time ; and he draws from the IVth corps the necessary troops to execute an outflanking movement, in default of the turning movement which cannot take place.

At Lützen he has four army corps at his disposal at the moment the Allies attack, and these four corps are grouped in the manner most convenient for moving them, and making them advance upon the enemy. It is with these four corps that he will maintain the fight while awaiting the tardy arrival of Bertrand on his right and of Lauriston on his left.

It is useless to multiply examples. We shall prove in every case that Napoleon entered on battle with a premeditated plan, conceived almost always after the same pattern ; that circumstances rarely permitted him to execute this plan in its entirety ; that more often he had to modify it, even abandon it altogether and improvise another ; finally, that the initial dispositions lent themselves to all modifications.

In proving that Napoleon always had a premeditated plan let us also observe that he hardly ever gave battle unexpectedly. Battles of encounter ¹ are exceedingly rare in his campaigns : one can only quote Marengo and Friedland. More usually the Emperor attacks a motionless enemy, or else he stops him in order to deliver battle at a well-chosen point. It is not that he likes fighting over reconnoitred ground ; what he wants to know above all is where to concentrate and round which position to manœuvre, so that he can on the preceding evening detach and recall corps destined for the turning movement.

¹ *I.e.* Battles arising from the meeting of two armies both on the move.—*Editor's Note.*

(e) *The Decision*

It has often been written that the Napoleonic battles were ended and decided by attacks in mass, by furious assaults delivered by columns which were both large and deep. There is no other example of attack in mass formation than that of Waterloo. It is more than doubtful whether the Emperor had anything to say to it, and we know the result. In all the battles directed by Napoleon the army as a whole, no less than each individual battalion in particular, fights by firing and in thin lines. The essential difference between the battle of the preceding century and that of 1805 or 1806 is that the fighting line is thenceforward divided up and irregular ; it is a series of thin lines separated by intervals, directed upon different points and not a continuous line ; but no deep formations are to be found in it.

Napoleon was strongly opposed to the employment of deep formations for fighting ; it is by fire that he seeks victory, and not by the *arme blanche*. " As the principal weapon of modern men is a projectile, their usual formation should be a shallow one, for that alone enables them to bring all their projectiles into play. . . . Ancient weapons demanded deep formations, modern weapons shallow ones." The order for the battle of Jena says :

" The general order of battle shall be to form two lines, without counting that of the light infantry." When the moment comes to open the decisive attack, the troops advance along the whole front ; but, faithful to his principles of economy, Napoleon never engages any but those that can be deployed in the first line :

“it is contrary to the usage of war to engage more troops than the ground allows one to deploy.” The reserve provides what is needed to strengthen or complete the first line. No great masses in depth here, whose morale is used up without their muskets being brought into play.

All the artillery is brought into line; and at the most important point Napoleon forms an enormous battery. In this supreme moment all the cavalry is pushed forward, and if it is numerous, it already begins the pursuit. Naturally there was no question of this in 1813, because there was not enough cavalry; but at Austerlitz, at Jena, at Eckmühl, all the squadrons were hurled forward in a furious charge on the roads to Olmütz, Weimar, and Ratisbon. It is the intensity of the final charge, and not the amplitude of the turning movement, which increases the results of victory. The facts on this point are in absolute contradiction with the opinion so often expressed by Clausewitz, that great turning movements have for their object only to increase the trophies of victory. The inverse has always taken place; the object and effect of the turning movement is to *procure* success; it is the charge that exploits the results of the manœuvre and augments it. If we make turning movements as wide as we can make them, it is that they may meet with less resistance and lead more quickly behind one of the enemy's wings. We know that they never result in a complete investment.

If he did not invent the pursuit, at any rate it is Napoleon who systematised it; who soldered it on to the battle, made it an essential factor—one might almost say, *the* essential factor of battle. And yet it

was with the pursuit as with the ideal manœuvre which he was always trying to realise—he succeeded in it barely four times: at Rivoli (with infantry!), at Austerlitz, at Jena, at Eckmühl. These, together with Friedland, are the most decisive victories. The wider manœuvres of Eylau and Bautzen did not give such big results.

(f) *Offensive and Defensive*

We have already enumerated several times the battles that Napoleon fought; a good number of them took place on ground which the Emperor had occupied beforehand and where he had resolved to await the enemy; nevertheless, he always attacked. For battle he knew no other mode of action than the offensive, and this even for the weaker army if it was not obliged to defend a fortified position with bad troops incapable of standing steady in open country.

It may be objected that at Leipzig, at La Rothière, at Arcis, Napoleon fought defensively, but he was only reduced to a defensive attitude during the struggle; he had begun by attacking.

In Napoleon's career we do not even meet with what is to-day called a defensive-offensive battle.¹ Some have wished to endow Austerlitz with this character, but it is a mistake. As Napoleon himself says, Davout's corps, directly its numerical weakness was known, counted for nothing in the calculations of the Emperor. It remained "outside the system of the battle." If this corps succeeded by *the vigour of its repeated attacks* in fixing the enemy in Sokolnitz, Napo-

¹ *I.e.* A battle fought by standing on the defensive till the opportunity comes for taking the offensive.—*Editor's Note.*

leon in no way counted on such a result, and had no need of it to carry out his plan. On the other hand, the line of the Goldbach, which to-day would be of real defensive value, was less valuable in a time when it was only possible to fire standing. Davout acts offensively only, allowing the enemy to crowd into the villages and returning to charge him time after time. Austerlitz is an exclusively offensive battle; besides, were not the French sent in to the attack at dawn?

The advantage of the offensive in battle is obvious: it disorganises the enemy, upsets his plans and combinations; the assailant, to some extent, imposes on him his initiative, his will. And yet of Napoleon's adversaries those who adopted the defensive suffered less grave reverses than those bold persons who opposed their offensive to his. The Moskowa and Waterloo are examples of this. As a matter of fact the law is not the same for all: it is above all necessary that a general should adopt a rôle proportionate to his capacity, a plan that he feels himself able to follow out methodically amidst dangers, surprises, friction, accidents of all sorts. There is no more difficult task for a general than to direct his troops in an encounter battle; that is to say, a battle in which two offensives are opposed the one to the other. It is then that it is necessary to display most rare qualities of lucidity, decision, and imagination. It is quite natural that in the clash of wills and intelligences, generals of meaner value, like Wurmser and Koutouzoff, knocking up against Napoleon, become quickly confused and disabled, incapable of continuously restoring order and harmony to the movements of their troops. These very men, on the other hand, may find themselves more at home and

more free in spirit among the relatively simple incidents of a defensive battle. He who is upset and flurried at Austerlitz because he is taken *en flagrant délit* holds his own with honour on the Borodino.

The defensive-offensive form succeeded, however, with Wellington in Spain against generals like Soult and Masséna. This enables us to conclude that no exclusive solution can be adopted, and that although we consider the offensive form combined with a wing attack as preferable, we cannot pronounce formally either against frontal attacks or against the defensive. The one essential is to appreciate correctly one's own value and that of one's adversary.

CHAPTER III

THE BATTLE IN MODERN WARS

§ I. BATTLE IN THE NINETEENTH CENTURY

NAPOLEON and Frederick, being men far above the average, had each conceived a method of battle which was very much their own, extremely complex, and suited to the tactics of their armies; each of these methods was an ideal which could only be more or less approximated to in actual execution. Such conceptions are the hallmark of genius; one does not find them after 1815—at any rate with the same stamp of power and originality.

The battle of Magenta,¹ if considered by itself without the operations which prepared it, is still a splendid work in the Napoleonic style. The attack on the Austrian right flank, led so boldly by MacMahon, without anxiety and without hesitation, in spite of the absence of all connection with the main body, is worthy of Davout or of Masséna.

The antagonists facing one another at the outset of the American Civil War were of very mediocre value; never have improvised troops indulged in such routs and panics; they were very unhandy, but in the

¹ June 4, 1859, in Napoleon III's Campaign against Austria in Lombardy.

Southern Army, at any rate, the commanders had received an excellent military education, and were men of the most energetic character.

“The corps of officers emanating from West Point is without doubt better taught than all the officers of Europe,” said Rossel; and Major Scheibert confirms this opinion. Moreover, many of them had served an apprenticeship to war during the earlier campaigns against Mexico.

With such men at the head of the divisions and brigades—no matter what the subalterns were like—it was possible to carry out army operations. Lee and Jackson did not fail to do so.

As early as 1861, at Bull Run, and afterwards at Cold Harbour, Cedar Run, and Chancellorsville, the turning movements of the Southerners decided victory in their favour.

But after the death of Jackson and his abler assistants it became impossible to renew these manœuvres. The Southerners confined themselves to a frontal attack at Gettysburg, failed, and at last, exhausted, were reduced to the defensive.

Grant knocked up against the strong positions they had prepared, and could not bring off successfully manœuvres against so skilful an opponent as Lee. Taking into account the numerical weakness of the Southern Army, he wore it down by indecisive battles, regular butcheries, and so ended the war by these primitive means.

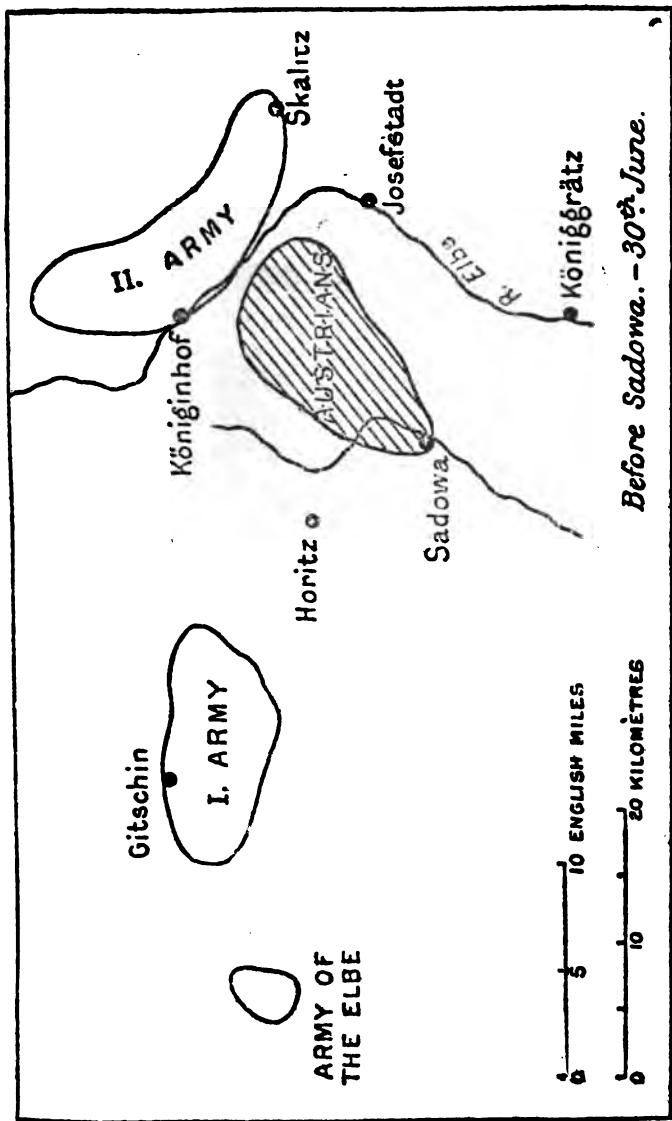
Hardly has the War of Secession ended than we enter on the period of Moltke's victories. In them we no longer find those great turning movements which characterise the Napoleonic style at Montenotte,

Castiglione, Eylau, Eckmühl, and Bautzen ; Moltke, bold as he was in the general management of operations, does not apply his boldness to extending his turning movements as did Napoleon. His forces are never divided in entering on the battlefield. If he has set himself examples from the great battles of the Napoleonic period, it is not Eckmühl, Castiglione, Bautzen he has chosen, but Wagram, Dresden, and the Moskowa. He clearly prefers the outflanking attack to turning movements of wide scope.

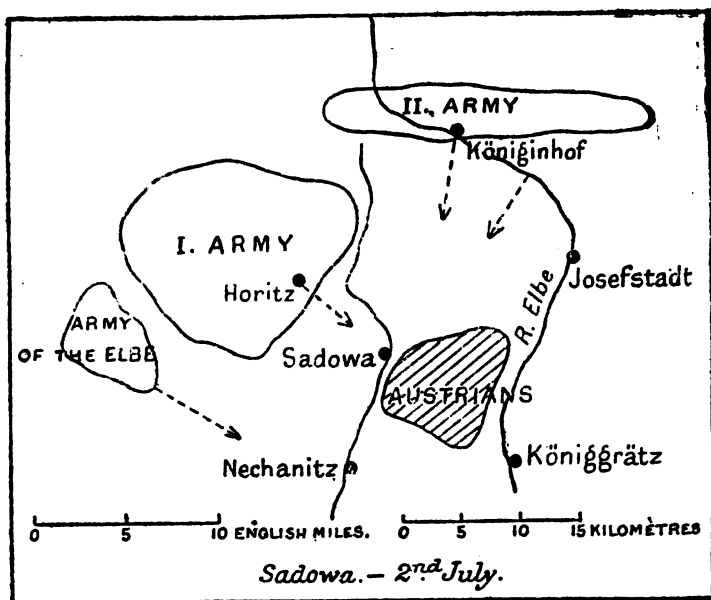
This predilection, which can be justified not only by success but a considered analysis of the conditions in which victory is obtained, explains itself primarily if we see in Moltke the disciple of Clausewitz. The latter despises the "geometric" element in war, and makes little of the direction of attacks. Unquestionably he recognises the usefulness of manœuvres, but for him they are but of small account beside the energy and activity with which the operations are conducted. He has not omitted to note that, among Napoleon's victories, the most decisive have been those in which the attack has been most vigorous and the pursuit most prompt and energetic. He considers, on the other hand, that the turning movement has for its object not to procure victory, but to augment its results. This opinion (contradicted by facts) leads him to prefer the less wide movements, by which he hopes to gain victory with greater certainty.

Moltke is strictly faithful to this doctrine.

In 1866 he takes great care to concentrate closely the troops of the three Prussian armies before the pitched battle. On June 30 they are still separated ; the Crown Prince, coming from Silesia, is in contact



Before Sadowa. - 30th June.



with the Austrian army to the north-east, between Königinhof and Skalitz; Frederick Charles, having barely got farther than Gitschin, is about 10 miles north-west of the hostile positions, and is separated from the Crown Prince by an empty space of $12\frac{1}{2}$ miles; the Army of the Elbe is still farther to the west.¹ Imagine Napoleon in such a situation; imagine again the victors of Leipzig in the place of the Prussians of 1866: there is no doubt that the general attack would take place next day, the three armies converging towards Königgrätz, the Crown Prince fighting the frontal battle, Frederick Charles taking the enemy in

¹ Sketch map. Before Sadowa, June 30.

reverse and seizing the defile of Königgratz on his line of retreat. Moltke does not admit such a solution. On the one hand he brings the 2nd Army and on the other the Elbe Army into touch with the 1st Army, and on the evening of July 1 all three together on a front of 18½ miles for 300,000 men.¹ This is the density of a decisive attack in mass. Then, but only then, Moltke concerns himself with outflanking the enemy. To gain the space necessary for deployment it is absolutely necessary to push out one wing or the other. Moltke, it seems, wishes to push out the two corps on the right to throw them against the Austrian left flank, but his hand is forced by Prince Frederick Charles, and it is the left which carries out the outflanking movement.

Moltke, at any rate, imposes his will during the battle. He prevents Frederick Charles committing all his forces in the frontal attack, where he considers it impossible to obtain success directly, and where the battalions would be piled up on one another and expended without profit.

The victory is decisive and crushing, but it is due to the men and the officer corps, trained morally and professionally for a number of years by the care of William, prince and king; it is due to the energy and vigour of the attacks, to the effectiveness of the fire, to the needle-gun, and to the good tactics of the Prussians. In it the action of the supreme command is hardly noticeable; it has confined itself to keeping in reserve troops of which no use whatever was made.

In 1870 Moltke again fights a great battle, that of August 18, at Gravelotte-Saint-Privat. The German army corps advance shoulder to shoulder against the

¹ Sketch map. Sadowa, July 2.

position where Bazaine has deployed his troops. Seven corps (VIIth, VIIIth, IInd, IXth, IIIrd, Xth, and the Guard) are piled up on a width of $7\frac{1}{2}$ miles, say with an average density of about 15 men per yard. It is true that the infantry of the IIIrd and Xth Corps, kept in reserve behind the centre, will not have to be sent in. Finally the XIIth Corps (Saxons), which is on the extreme left, advances while still remaining glued to the Guard, and brings off an outflanking movement with one single brigade.

When drawing near Sedan the two German armies are again held closely together. During the evening of August 31 they extend over a width of $10\frac{1}{2}$ miles for $8\frac{1}{2}$ army corps, or an average of 2,200 yards per army corps. One is amazed to see an army thus closed together succeed in enveloping its adversary! But the latter had bunched himself up in a triangle of $2\frac{1}{2}$ miles a side, and no longer moved.

In any case we perceive in the three great battles directed and won by Moltke a marked preference for the outflanking movement as against the turning movement.

The pupils or lieutenants of Moltke conform very precisely to the same doctrine. In every partial combat commanders of all ranks manœuvre by wings; their tendency continually to outflank the enemy by degrees produces the complete outflanking movement on one of the French wings, as is the case with the Saxon brigade which brings about the fall of Saint-Privat, and the Prussian regiment which brings about the fall of Froeschwiller; on the other hand, one hardly ever sees a combined movement for a battle or a big fight projected or ordered; and except in the

case of the battle of Le Mans there is never a turning movement.

At Froeschwiller (Woerth)¹ all the troops of the Vth and XIth Corps are committed to a frontal fight: it is through the initiative of a brigadier-general that a regiment is sent to the left, outside the front of the French, to come in on their right flank; and this simple movement determines the French retreat along the whole line, and hastens their disaster. Would not the victory have been more complete and less expensive if the outflanking movement had been ordered by the supreme command, carried out sooner and with a more numerous body of troops? No one will dispute it; but, according to Clausewitz, such a manœuvre would be better suited to exploiting the victory than to procuring it; it would offer uncertainties, even dangers, which should lead to the adoption of a less ambitious method.

In all the battles fought during the second portion of the war the conduct is the same: tendency to the outflanking manœuvre in officers of every rank, but no flank attack prepared by the supreme commander. The lessons to be drawn from this are in keeping with one another.

The battles of Beaune-la-Rolande, of Loigny, of Josnes-Beaugency² do not show very definite manœuvres, but the various French corps were always dislodged by outflanking attacks. However little pronounced they may have been, these latter almost at once gave the result which would have been sought

¹ August 6, 1870.

² Fought by the Germans against the improvised French armies of the second stage of the war of 1870-71.

in vain from a frontal attack carried out by considerable forces.

If the outflanking movements always led to success, and showed themselves indispensable to obtain it, it was not the same in the case of turning movements. The manœuvre attempted by the French at Pourpry against the left flank of the Germans was got wind of in time and stopped. It was the same with the only manœuvre on a wide scale attempted by the Germans—that of the XIIIth Corps at the battle of Le Mans. This corps, detached openly against the left flank of the French by the Paris and Nogent-le-Rotrou road, while the main body of the army came by the Vendôme road, was reported in time and stopped. It neither produced a decision nor even indirectly led to one.

Speaking generally, the manœuvre with a wide scope, the manœuvre always desired and sometimes accomplished by Napoleon, was only attempted once or twice in 1870, and that without success. The method being known, the turning movement foreseen by the adversary, and reported more quickly, thanks to the advance made in methods of communication and in cavalry, the secrecy necessary to the success of the manœuvre is difficult to obtain.

The impossibility of taking a naturally strong and well-prepared position *frontally* shows itself everywhere. Already proved by the battle of Gravelotte-Saint-Privat, it is again demonstrated by the attacks of the French against the edges of Villiers and of Coeuilly (in front of Champigny), and against the park of Buzenval.¹ It is above all proved by the battle of Héricourt, where Werder's small army resists that

Various actions during the sorties from Paris.

of Bourbaki with a density of barely 12 men to 10 yards.

On the other hand, the improvement in weapons, by compelling the abandonment of formations in close order, the only mobile ones, and by binding the fight more closely to the ground, still further fixes the troops engaged. The battle holds face to face two thin lines almost incapable of any manœuvre, and, when the general reserves are pretty well used up, it only requires an outflanking movement carried out by the very smallest unit to crumple up everything from flank to centre. This is the story of Froeschwiller and Saint-Privat. Thus, as a general proposition, the method followed by the Germans in their battles of 1866 and 1870 appears to be justified: try always to outflank, not to turn, the enemy. We shall see how more recent wars have brought to light again the advantages of turning movements with a wide scope.

In the second part of the war of 1870, regular troops, well officered and trained, and experienced in war, contended against improvised armies which sometimes had on their side superiority in numbers. When, as at Coulmiers, the superiority is crushing, decisive results can be obtained by the newly raised levies. These latter also proved, at Loigny, for instance, that with equal numbers they are able to act with vigour and not without success in the frontal fight; but one notes everywhere that, for lack of sufficiently well-trained officers, these improvised armies are masses which it is difficult to get to perform evolutions, and cannot obtain victory by manœuvre, and, consequently, are incapable of bringing off a decisive success.

Well-officered troops, on the contrary, compensate

for their numerical inferiority by the quickness of their manœuvres. As at Pourpry, they form front to unforeseen attacks by bold movements which are helped by the very smallness of their numbers, and which their enemy cannot check. On the other hand, they cannot obtain complete success in the battle, for every attempt to carry out an outflanking movement obliges them to divide up into detachments separated by wide intervals.

Improvised troops, although able to succeed in an attack which is briskly led, do not make good captured positions as do regular troops. It is especially in this respect that the difference in staunchness between the two shows itself.

§ 2. LIAO YANG

The Japanese marched on Liao Yang by two roads : on the east that which comes from Antung was followed by the 1st Army (Kuroki) ; to the west the 2nd and 4th Armies (Oku and Nodzu) advance along the railway. The Russians tried to stop them in an advanced position at about 16 miles from Liao Yang ; their forces were divided into two groups corresponding to the two roads of approach, with a reserve too far off to intervene. Between the two stretched a mountainous region, difficult to cross, 12 miles wide ; the group which operated to the east was in the middle of mountains ; that to the west was in a country of plains and hills.

The two portions of the Russian army were of about equal strength. In the plain the Japanese attacked with a barely marked superiority, in the mountains with forces distinctly inferior in number. It was on

this side that contact was first obtained, Marshal Oyama perhaps hoping to draw thither the attention of his enemy. General Kuroki attacked the front in vain, but one of his regiments succeeded in making the position fall by outflanking it, in spite of the difficulties of the ground. In the plain the Russians refused battle. They again took up a defensive position, but this time a continuous one, 5 miles south of Liao Yang. On it they deployed on the west and centre 111,000 to 120,000 men on 11 miles. On the east they only opposed four divisions to Kuroki's victorious army.

This general, then, on August 31 dared to move by a night march in the middle of the mountains outside the enemy's left; he thus completely abandoned his line of operations on Antung. What he had seen up to then of the enemy and of his own strength gave him unlimited boldness; and in fact the Russian general, who knew precisely the numerical weakness of the 1st Japanese Army, was none the less anxious at feeling it on his left flank. One never knows what may happen!

On the opposite side the armies of Nodzu and of Oku attacked with 70,000 men the 110,000 Russians deployed on 11 miles; they succeeded in outflanking them. A hostile detachment of unknown strength threatened their left flank; but without allowing themselves to be worried they opposed it with a small body of troops which succeeded in stopping it. They carried the strong positions on which the Russian right rested; General Kuropatkin ordered a retreat.

The fight in the third position, quite close to Liao Yang, was nothing more than a rearguard affair.

To sum up, this battle lasted from August 26 to September 4 for Kuroki's army ; from August 31 to September 4 for the others ; the losses were about 20,000 men on either side, or 15 per cent. of the troops engaged.

If we consider only the zones in which there was real fighting, the density of the troops engaged was about 6 men to the yard on the Russian side, and 4 on the Japanese side. These figures would have to be materially reduced if we counted the space left empty between Kuroki and Nodzu as being in the battlefield ; but in that case we should have an incorrect idea of the real features of the battles fought in front of Liao Yang. The density of the troops was actually comparable to what it had been in former battles.

If we go into detail we find remarkably instructive incidents :

1. Frontal attacks fail. They are very lengthy, requiring one day for reconnaissance, one or two for the approach march. General Kuroki seeks for victory by an attack on the centre ; he does not get it in this way, but through the outflanking movement carried out by a regiment ;

2. Only outflanking movements obtain success, and victory remains to that one of the two adversaries who has the last word to say in this matter. We have seen how General Kuroki pushes the application of this principle to the extreme limit ; his boldness deserves that we should dwell on it. He recognises that his attack on the second Russian position would fail endlessly ; he wants at all costs to act effectively, and that can only be done by gaining the enemy's flank.

“ On this day of the 31st August General Kuroki

carries out one of the *boldest* manœuvres which history records.

“ His line of communication is the road from Liao Yang to Seoul; besides this track there are only mountain paths; at first he leaves three brigades to guard it; then, at the time he is about to make his offensive movement, he takes away one of these brigades to reinforce his offensive. At the time when he summons to himself the rest of the 2nd Division he knows that the Guard may have to contend with the whole of the Xth Russian Army Corps. He plunges into the unknown then with the certainty that the Mandarin road, whose preservation is for him a vital matter, is guarded by two brigades and is threatened by four.

“ He will risk the adventure with a force of two divisions, which it is true will soon be supported by a reserve brigade, and will throw himself against an adversary of the strength of five infantry brigades and a cavalry division.

“ At a given moment his flank and rear will be threatened by Samsonoff's Cavalry Division and Orloff's Infantry Division; *this will only lead him to assume a still more energetic offensive.*”¹

Such an offensive spirit was bound to win against the passivity of the Russians, and alone suffices to dispense us from any other explanations.

§ 3. THE SHA-HO

In the battle (or battles) of the Sha-ho the preparatory dispositions seem to have been well made by the

¹ Colonel Cordonnier, “ Cours de Stratégie et Tactique générale de l'École sup. de Guerre.”

Russians to ensure success ; on the left wing General Stakelberg had at his disposal three army corps to attack three Japanese brigades on a front of 12½ miles. All the attacks were fruitless, owing to faults of execution. Considerable forces were used against the *point d'appui* of the extreme right of the Japanese, Pen-si-hou, which was attacked in front and in reverse ; but the attackers did not cover themselves and hardly reconnoitred at all ; at the moment when they were about to seize Pen-si-hou a Japanese cavalry brigade in its turn took them in flank and, by the fire of its machine-guns, inflicted on them heavy casualties in a few moments. These losses and, above all, surprise made the Russian infantry give way. Rennenkampf's cavalry was absent at the critical moment.

Not far from there the Russians took several positions, by means of which they might have pressed their offensive and obtained a decision ; but the reserves had been kept far from the first lines ; the troops who conquered the Japanese positions remained there without support and, some time afterwards, were driven out of them. Then the Russian reserves were put in motion, marched to the attack in deep columns, and were scattered by the fire of two companies.

Marshal Oyama wished to attack with his left ; he had only allotted to Kuroki's army a defensive rôle, and depended on the united efforts of Oku and Nodzu to outflank and push back the Russian right. Although these two generals gained repeated and notable successes, the battle as a whole did not take the shape desired by the marshal, who during the later days formed other plans.

The Russians had sufficient superiority in numbers

to enable them to make head against the whole Japanese army while they were piling up three army corps against Kuroki's right. General Oku's army, therefore, did not succeed in outflanking the Russian right. In return the Russians had made the mistake of not forming a continuous line, but of holding a certain number of isolated points which formed so many salients; each of these *points d'appui* was enveloped in turn by the Japanese attacks. In this way the Japanese left succeeded in driving back the Russian right without requiring a big outflanking movement; but it is above all in the centre, which was less strongly held, that the Japanese Guard obtained marked success; by taking several isolated *points d'appui* it succeeded in piercing the Russian centre and then wheeled a large part of its force in towards its left.

Thus the Russian right found itself pinched in between the Japanese left and centre; the Japanese Guard in its turn had its right very much in the air and exposed to counter-attack.

A brigade was detached on this side, not to accentuate the success obtained, but to fill the gap made by the left wheel of the Guard, while Marshal Oyama made every effort to converge against the Russian troops already almost surrounded. These, however, were able to free themselves, and a general retreat on the part of the Russians put an end to the battle.

Here Russians and Japanese (200,000 men against 160,000) fought on a front of 30 miles. They did not engage in two or three partial battles, but in twelve to fifteen fights for localities. On the Russian side want of skill in minor operations, and on the Japanese side inferiority in numbers, prevented any general

plan succeeding. The victory of the Japanese is due to their superiority in all the details of fighting, and above all to their spirit of the offensive pushed to the extreme. The battle of the Sha-ho shows us a remarkable instance of an attack on a point of a front which succeeds in completely piercing the enemy's centre. On this subject one may note that this local success, important as it was, had not been foreseen, and could not have been. No reconnaissance could warrant the presumption that there would be no Russian reserves near the point attacked. When the Japanese Guard found itself hurled into the heart of the Russian positions, with its right completely in the air, it only needed that the enemy should have a brigade on this side to transform suddenly into disaster the success gained. At 1st Army Headquarters anxiety was intense. Let us add finally that since the decision had not been sought at this point by the supreme command, the success of the Guard could not be followed up on a large scale so as to bring about the complete breaking in two of the Russian army.

This latter had over its positions as a whole a depth of 4 men to the yard of front. Comparing this figure with those provided by former wars, one does not find it too weak to admit of a serious frontal defence. Contrasting it with what has happened in other battles, it seems that, with such a density, the Russians could have organised a line of defence capable of making a more protracted resistance. But when it is a case of deploying on a line of over 30 miles one rarely meets with a continuous position ; the ground offers alternations of heights and depressions, strong points and weak points. The defender then thinks that he will

make a judicious economy of forces by only holding and preparing the strong points and neglecting the intervals. He forgets that in fortification the curtains have their place as well as the bastions, and together with them compose a continuous enceinte. If we must undertake the defensive, it can only be done with a continuous line. It cannot be held everywhere in as little depth as we could wish ; often we shall even be unable to avoid having recourse to the offensive at certain points which are too unfavourable to the defensive. From this we must conclude that if on the one hand recent progress in weapons has admitted of the holding of good defensive positions with very weak effectives, on the other hand the fronts on which armies of 200,000 men and more deploy are such that we can scarcely find favourable positions of sufficient extent. It seems that even on account of the very extent of the front the absolute defensive is not admissible.

As far as the attack on a centre is concerned, we see that success can hardly be foreseen, nor above all can the point be determined in advance where the break will occur. To profit by it when it does occur it is necessary to pour strong reserves into the gap immediately. Mounted troops alone seem able to fulfil the required conditions of being brought in good time to *any point whatever* of these immense fronts.

§ 4. MUKDEN

The battle of Mukden (from February 27 to March 8) again shows the inefficiency of the Russian troops ; they are evidently unable to give effect to any of the plans which their Commander-in-Chief may form, should he form any. When Nogi's Japanese army,

for instance, appears on the right flank of the Russians, very superior forces are opposed to him without being able to stop him. On the other hand, well-prepared positions are defended to the bitter end, and the Japanese only take them by compelling the Russians to retreat by outflanking movements.

Marshal Oyama initiates the frontal attack with his three old armies (Kuroki, Oku, and Nodzu). The two armies recently come from Port Arthur (Nogi) and the Ya-lu (Kawamura), kept at first in rear, and out of sight, will be entrusted with outflanking movements which the endeavour has been made to initiate in secret.

Kawamura is sent forward first on the right, in the mountains. It was intended he should draw there a large part of the Russian reserves and thus free the ground in front of Nogi, and that the latter, starting then, should advance on the left against the flank of the Russians.

We thus find ourselves confronted with a preconceived and skilfully organised operation. The event was to show the Japanese that they would have done better to operate more widely. Nogi, having most accurately overlapped the enemy's right, comes in on his flank and then sees that he would have done better to push boldly beyond it, so as to take the Russians in reverse and come straight upon Mukden. He profits by the inertia of his adversary to gain ground to the northward by a flank march made under his very nose. At the same time he forms a cavalry corps which will extend his action still farther to the north.

The absence of strong general reserves among the Japanese has been commented on and almost criticised ;

but all their forces were employed as actively and usefully as possible. Inferior in numbers to their enemy, they knew how to produce, both in the details of the fighting and on the battlefield as a whole, those outflanking movements without which there was no possibility of victory ; their numerical inferiority did not allow them to do more. In fact we ought to be astonished at the wide scope which the movement against the Russian right was able to assume.

The Mukden manœuvre seems to be that which will usually be imposed by the experience acquired during the last century. Napoleon, as we have seen, conceived three operations in battle, each fairly clearly defined : (1) a frontal fight absorbing almost the whole of the adversary's forces ; (2) an attack against one flank of the enemy, disturbing him, shaking his morale, and forcing him to upset his battle array to meet it ; then, almost immediately (3) the final attack, driven home with all the cavalry and artillery and with the requisite amount of infantry.

In our day it is difficult for the assailant to exhaust the forces of the defender, as he could a hundred years ago, by a frontal fight only ; the defender can greatly reduce the depth of his lines on selected positions. It is, then, by successive overlapping outflanking movements, which the defender is driven to meet, that we may lead him to use up his reserves : it is thus that the Japanese acted at Mukden. The more economical, the more skilful, and the stronger of the two adversaries succeeds in retaining the last fresh troops, and then passes to the second phase, attack on the hostile flank, which threatens the enemy's line of retreat and produces disorganisation in his units. This is the attack

which the Japanese carried out with Nogi's army. The experience of the Russo-Japanese War, like that of 1870, has proved that the least outflanking movement decides the entire victory; but the Japanese experienced at Mukden, and demonstrated by their actions, that when the enemy lends himself to it, it is most advantageous to have recourse to a turning movement with a wide scope, which exerts a prompter and more effective threat on the hostile line of retreat.

The battle of Mukden, especially compared with that of the Sha-ho, shows what the defensive in modern battles can do. On the Sha-ho the Russian front, on which the troops had a density of 4 men per yard, was easily pierced by the Japanese. It would seem that this was so because it was not continuous. At Mukden the front was continuous; it was covered with an uninterrupted trench; it held good for eight days, and the retirement was only brought about by the turning movements carried out on the two wings. Yet the density of the troops was no greater there than it had been on the Sha-ho, and the assailants were more numerous.

It would seem clear then that a position cannot be held unless it is fortified; this is a principle which Napoleon had already laid down.

It is also necessary that the position should be continuous and should not contain gaps. From this, as we saw at Mukden, the obligation arises of making immense lines of entrenchment, 30 to 40 kilometres in one piece, such as were made two centuries ago to cover provinces. The long lines of Mukden are characteristic of modern defence.

From this follows a most important deduction;

if modern weapons admit of holding defensive positions with fewer troops than formerly, on the other hand it is impossible to distribute the forces very unequally. As an average, we can do with a fairly small number of men per yard of front, but on no part of the front can we afford to come down much below that average. The offensive, on the contrary, can choose points for attack, and on them concentrate its efforts. By an uneven distribution of its forces it can compensate for the saving in men realised to the defence through the strength of its positions.

CHAPTER IV

THE MODERN BATTLE

§ I. CAVALRY IN BATTLE

IF cavalry no longer gives the *coup de grâce* to the vanquished, as it formerly used to do, it is because generals do not try to employ it for this purpose. The Prussian cavalry at Sadowa was only waiting for the signal to pursue; the King of Prussia, it is said, refused to let it charge in order to spare the enemy (?). What would have been left of MacMahon's army after Froeschwiller if the German cavalry had pursued energetically on the Niederbronn road? At such moments beaten troops are without resisting power.

Even if one must no longer reckon on useful charges during the course of the battle, cavalry remains essentially the pursuing arm, that whose action is the most irresistible and most efficacious on demoralised troops in process of breaking up. Perhaps at times it will be necessary for it to use its carbines against some units still capable of offering resistance, but very often it will still be able to produce great results by the mere rapidity of its action.

"Whenever possible," said Napoleon, "we should always prefer the thunderbolt to the gun." There are no mounted troops, however little accustomed they may be to the use of the sabre, who have not found

opportunity to charge rather than to shoot. The Boers, who normally only used the rifle, and merely employed their horses as means of transport, charged several times when they fell unexpectedly upon British troops. The great cavalry leaders of the American Civil War, in spite of the great use they made of dismounted action, made numerous and fine charges.

We must not, however, become a prey to catch-words, and overdo the assertion that cavalry may find opportunity to intervene "during the course of the battle." On the front there is only room for skirmishers lying down and for concealed batteries. For the matter of that, let us think of some former battle, of Saint-Privat, Coulmiers, Mukden; at what moment in any one of these battles can we conceive the apparition, even if it were instantaneous, of a body of cavalry charging, were it but a single squadron? Undoubtedly cavalry must still charge and so obtain great results, but it must be outside the front or in the pursuit.

The opportunities for charging are only to be found in a very limited number of cases; if to this we add the fact that in the wars which have taken place in Europe since 1815 the opportunity of charging was, so to speak, never found, we should be tempted to infer that the rôle of cavalry is becoming insignificant, and that the arm may be reduced without inconvenience.

As a matter of fact, cavalry has never been more necessary, and cannot be too numerous, provided it is handy in fighting with shock and fire action, according to the circumstances of the case.

"We have expended a considerable number of millions," says Rudyard Kipling, "to prove once more

this fact, that horses go faster than men on foot, since 2 and 2 make 4." And it follows that men on horseback will do better service than men on foot, provided that they do not, on the pretext that they are mounted, abandon the weapons which are used by men who fight on foot. In a word, there will never be horsemen enough if, while ready to charge as soon as opportunity to do so offers, they do not confine their action to these extremely rare occasions.

There is one very remarkable fact in the decisive manœuvre at Mukden ; it is the necessity recognised by the Japanese of forming a cavalry corps to extend the turning movement and reach the enemy's line of retreat. It would seem, in fact, that in future only mounted troops will be able to carry out the decisive manœuvre with the rapidity and secrecy indispensable to it. When Napoleon introduced great turning movements in battle, he was able for some years to give effect to them by means of army corps directed in advance against the flanks. The enemy did not foresee such operations, and did not dream of countering them. Nowadays this is no longer so, we can only bring off a surprise by keeping the troops intended for out-flanking movements out of sight, that is to say, usually in *échelon behind* a wing of the army. They are thus concealed until the moment when they pass the front of the troops already engaged. But if corps which come out like this are infantry, it is difficult for them from the moment they have revealed themselves to carry out a movement of any great scope. Only mounted troops can throw themselves quickly on the flank of the enemy far enough back to threaten or perhaps even reach his lines of retreat.

A numerous cavalry is necessary therefore to give the rapidity and power requisite to attacks in flank and in reverse. It will also be necessary to form strong reserves suited to putting to good account the partial successes gained on the front at points which cannot be foreseen. We have seen that the great turning movements to which Napoleon was accustomed became difficult to bring off, because it was almost impossible to conceal from the enemy the march of the troops charged with their execution. Mounted troops alone can obtain the indispensable surprise effect, and can outpace, if not the information of their movement, at any rate the move made to counter it.

The dismounted action of cavalry is as old as fire-arms. It was practised in the sixteenth century. In Turenne's battles the dragoons formed great swarms of skirmishers. Little by little the custom was forgotten, and, in spite of Napoleon's efforts, dragoons hardly ever fought except as horsemen, sword in hand. After 1815 all European cavalry forgot the use of the carbine.

During the American Civil War a reaction came about in this matter. The cavalry of both sides, armed with carbines, made considerable use of them during raids and in battle. Dismounted action was their customary procedure. For instance, at the battle of Cedar Creek, on October 18, 1864, the Federals were on the point of being beaten when Sheridan intervened with his cavalry. He dismounted his men, made them take their carbines, and attacked the Confederates, who were establishing themselves in the captured positions; he threw them back into the valley of the Cedar Creek and recovered the victory.

Six months later, Lee's army, beaten and almost surrounded near Richmond, succeeded in slipping away; but Sheridan's cavalry overtook it, passed it, dismounted, and barred its road. Lee, checked in his retreat, was soon surrounded and capitulated in the open field. These decisive exploits, accomplished carbine in hand, did not prevent the American cavalry from charging sword in hand when the opportunity offered, thus proving that dismounted action is in no way incompatible with the cavalry spirit.

The lesson was thrown away on all the cavalries of Europe. In 1870 the Germans had not even got carbines. The Transvaal War produced a pretty sharp reaction. It was quite clear that it was not possible to acclimatise in Europe the organisation and methods of fighting of the Boers, for lack of the peculiar circumstances which had called them into being; but it was none the less evident that the British infantry encountered serious difficulties from the mere fact that its adversaries were mounted and were extremely mobile. The British found themselves driven to make calls on the cavalry or, for want of cavalry, on what was termed mounted infantry. They have got so used to it since then that they have now made its employment customary. In his reports on the Manchurian battles, General Ian Hamilton notes numerous cases where the intervention of a body of cavalry would have had most far-reaching results.

Up to now French cavalry has hardly gone in for dismounted action except in its defensive aspect, but it is above all the offensive fight which it must undertake, supported by its guns and machine-guns. Its task is to move rapidly to decisive points, and there

to attack, not merely to defend itself. German cavalry for some years now has set it the example in its manoeuvres.

§ 2. BATTLE IN THE TWENTIETH CENTURY

The battles of Liao Yang, the Sha-ho, and Mukden differ much, in their vast proportions, from those which had been fought till then. Do they give us a correct idea of what the battles in a future European war will be like? It must not be forgotten that it is not 200,000 or 300,000 men, but 1,500,000 or 2,000,000 who, for instance, will be engaged on either side in a Franco-German war; and we may anticipate a battle which will bring to grips 3,000,000 of men on a front of 150 to 250 miles.

It is true that in an important study of the warfare of the future a German military writer¹ forecasts the operations in such wise that the decision is brought about by a series of partial battles fought at different dates and in different places. The greatest of these battles is thus found to be no greater than the proportions of Mukden.

One may therefore still admit cases in which the battles of the future will be comparable to those fought in Manchuria.

However, each of the two adversaries having united his armies in a zone barely wide enough to hold them, and intending to act with as much unity as possible, there will be a tendency to bring about one single battle. The various armies no doubt will not fire their first guns on the same day, but the frontal engagements

¹ General von Falkenhausen, "Der Grosse Krieg der Jetztzeit," Berlin, 1909.

will be sufficiently lengthy to give time for the wing armies to come into line before a decision has been reached and thus to participate in one and the same battle.

The great difficulty inherent in bringing all the troops into action simultaneously leads almost of necessity to those successive comings-up into line of which Mukden has given us the example.

As we have seen by the battles fought for the last hundred years, success can be obtained in very different ways ; breaking a front is possible, but one cannot reckon on it, will it, prepare it ; moreover, a local success at a point in the front creates deadly difficulties for the victor. With equal forces the enveloping situation gives very marked advantages. The more armies gain in power, the more pronounced do these advantages become, in such wise that, of two equal armies, that one which succeeded in piercing its adversary's centre would perhaps, by its very success, place itself in a most dangerous situation.

The attack of a flank is to-day more than ever the most sensible form of the offensive.

We have seen by the examples of the First Empire, and perhaps even more by that of Mukden, the advantages of great turning movements. On the other hand, Moltke always preferred to them outflanking or overlapping movements, which seemed to him less ambitious and more prudent. Napoleon himself was satisfied with these when he had to attack an enemy very strong materially or morally. It would be absurd to predict that the operations of the future will deliberately assume the one form or the other. What, on the other hand, does seem certain is that the general will

no longer plan and carry out a manœuvre or an attack with the astonishing precision which Napoleon brought to it.

It will be remembered that in such battles as Castiglione, Wagram, Lutzen, Bautzen, Wachau, the attack directed against the hostile flank had not for its aim to produce a decision immediately and directly. Its function was to absorb the enemy's last reserves, and Napoleon was wont to seize the precise moment when this result had been achieved to order the general attack. However, at Eckmühl, at Eylau, at Dresden, and in all the battles fought since then, at Sadowa as at Magenta, at Gravelotte as at Mukden, the corps which turns or outflanks a wing of the enemy does not give the signal for the decisive attack; victory results simply from the convergence of the two attacks on an adversary who cannot form a front to both. It would seem that it will be so in the future. The synchronisation necessary to the skilful Napoleonic manœuvre is henceforth a little difficult to ensure, and moreover it is useless. Telegraphs and telephones, with or without wires, will at a pinch supplement direct orders over the battlefield. We can picture to ourselves clearly Marshal Oyama, at Mukden, informed within the hour that the IIIrd Army had come up into line, and telegraphing no less quickly to the other four armies an order for the general attack. What does not appear so clearly is the utility of synchronisation. The flank attack will react right up to the far end of the battlefield, though after a space of time which we cannot estimate.

If we cannot copy the actual manœuvre of Napoleon, at any rate we must not renounce seeking inspiration

in it. We will ask of the flank attack that it should determine victory. It is always of the general attack, ordered at the critical moment, and then changing into pursuit, that we must demand decisive victory—when we are strong enough.

The battles of the future seem at first sight to comprise less manœuvring than those of the last century. Whilst the plan of a Napoleonic battle shows harmonious proportions, about as much width as depth, a division of the force into two almost equal portions, destined respectively to the frontal fight and to manœuvre, we might anticipate that the considerable front on which modern armies deploy would absorb the greater portion of their strength and so leave them small available means for the decisive operation. It is enough to turn to the battle of Mukden to see that nothing of the sort will occur; out of five Japanese armies, three manœuvred; only two fought frontally during the entire period of the struggle.

Two centuries ago, was it not also believed that battles could only show the linear form, and did not Frederick, before Napoleon, almost immediately break the uniformity of the so-called classic mould?

It is Frederick also who pressed to the utmost inequality in the distribution of troops; his oblique order, the promptness of his movements and attacks, allowed him to cap one end of the hostile line, and to crush it under fire, without engaging anything on the opposite wing.

After him the depth of the first line is pretty well the same along the whole front; the troops charged with the outflanking or turning movement are deployed

like the others. It is by the play of the reserves that victory is determined.

Placed near the point where Napoleon sought for a decision, he engages them and deploys them in such a manner as to obtain superiority of fire at the decisive point. They are still used sometimes to re-establish the fight along the remainder of the front. A century ago all the available troops could be kept in reserve at some single spot, to be directed thence either against the flank, or the centre of the enemy. In our time the extent of battlefields hardly admits any longer of this simple solution; it is impossible to keep a body of troops in such a position that it can intervene at the different extremities of the battlefield.

This use of reserves—now more than ever a necessity—gives rise to the greatest danger which threatens the higher command. An irresolute commander does not engage his reserves early enough or in such a way as to impose his own initiative; he wastes them in timid counter-moves, or, on the other hand, he fears to use them, and that is the most grievous fault which can be committed in battle.

On the front the fight will be more prolonged than it used to be; but we must not exaggerate to ourselves its duration. The same troops will not fight for more than two days without becoming exhausted. It is therefore indispensable to keep reserves ready to intervene on various portions of the front, if the attack on which we reckon to decide the victory requires more than two days. There lies one of the great difficulties with which the genius of the commander will have to contend in a modern battle; he

may find it necessary to deploy all his forces to obtain victory at the point where he seeks it (and this was so in the case of Marshal Oyama); while, for want of reserves, he may see his front broken before he has succeeded in his attack.

To this aspect of the case the Napoleonic method does not seem susceptible of adaptation. Perhaps the generals of the future will rather approximate to the oblique order as Frederick applied it at Leuthen and Rossbach. While the bulk of the force operates offensively on one of the wings, the other may, not indeed fight a retiring battle, a most dangerous if not impracticable proceeding, but be reduced to a screen of light troops, capable of deceiving the enemy for two or three days.

Cavalry in large numbers with its cyclist supports, etc., will render the most valuable services in forming such screens, as also in promptly extending the turning movement towards the enemy's communications. For sudden concentrations railways may be used.

Resources will not be lacking to him who will and can make use of them. It will undoubtedly require skill to conduct the battles of the future, as it has in the past. The problem of the twentieth century will be neither easier nor more insoluble than that of the eighteenth; to solve it well demands a powerful and ingenious mind which has at its disposal all the new means for grappling with the new difficulties. Masses and distances have increased, but similarly means of communication have improved. That same progress which has admitted of concentrating and feeding, and consequently of employing, the enormous armies of to-day, ought to help in bringing into action the masses

of men on the immense areas over which they will be spread.

We have been able to trace throughout the course of history the struggle between the defensive and the offensive. It is no mere platitude to state that the offensive alone brings victory, that the defensive only allows time to be gained or men to be economised. It is a truth for all time ; it will dominate the battle of the future as it has that of the past. But we must ponder this other truth, no less eternal, that the defensive cannot always provide even the advantages which we think of demanding from it. To be able to economise troops in defending a position two things are necessary—that the position be strong and be strongly prepared, and above all that the enemy comes there to attack us.

It is necessary to have a position which is strong by nature, and it must be entrenched and its defence organised ; but it must also be continuous and homogeneous, and it must not present salients like that of the Russians at the Sha-ho ; it must be occupied at every point and not in a disconnected fashion.

It is necessary that this position be attacked by the enemy, and that with forces superior in number to those deployed on it ; failing this, its function is not fulfilled. If we find that the enemy does not attack in strength, there remains the alternative of assuming the offensive ; but here again it is necessary that our position shall lend itself to the offensive, particularly that it should not be covered by some big waterway whose defensive value thus turns against us.

A century ago an army often found good defensive positions admitting of an easy assumption of the

offensive. They become rarer and rarer as fronts extend. To-day it is no longer mere accidents of ground but great geographical features which admit of the formation of defensive positions of sufficient extent. These will almost always be provided by streams or rivers, and thus they will be very defective, precluding resumption of the offensive.

And so the defensive would seem to be doomed to further loss of its advantages. Everything leads us to anticipate that the battles of the future will be collisions of armies acting offensively, that is to say they will be encounter battles.

Formerly, by this expression were understood unexpected engagements in which both sides found themselves at grips without having had time to make a plan of action. But this mutual surprise is no longer the characteristic of the encounter battle. That which distinguishes it from those we have studied is that both adversaries operate offensively. Neither has established himself on a defensive position, but both of them are quite well aware that they are marching the one towards the other, and the encounter will not surprise them.

The reconnaissances will be quicker and more sketchy, the part played by the unforeseen will be greater. Since the attacks do not knock up against prepared positions they will succeed more easily. Breaking the enemy's line will be more possible of attainment. To sum up, the relative worth of the two commanders will make itself felt more strongly; victory will soon be to him who displays most resolution, grip of the situation, and imagination—*it will be to him who knows how to act quickly.*

It will also be his who *can* act quickly. He must have his forces well up, his main bodies at but little distance from the advanced guards, his columns relatively short; briefly, march dispositions which are pretty well the opposite of those we practice with a view to attacking a prepared position.

§ 3. THE RESULTS OF BATTLE

The object of the battle is the ruin of the enemy's army. This result is hardly ever obtained in the battle itself; usually it requires pursuit to complete it. It is rare for an army to be as disorganised by battle as was that of MacMahon after Froeschwiller; and yet it would have needed a couple of days' pursuit to destroy it entirely.

In 1806 the Prussian army which was beaten on October 14 at Jena was only completely destroyed on November 7, after an uninterrupted pursuit of twenty-four days.

In the battle itself it is not the material losses suffered by the beaten army during the fight that reduce it to a state of inferiority; the victor has often lost more. An army acknowledges itself to be beaten, not by reason of the losses it has already suffered, but *because of those it will suffer if it continues the struggle* in the desperate or very unfavourable situation in which its adversary has placed it. It is about to be hemmed in and crushed by projectiles, or else the disorganisation of its units no longer allows of dispositions being made, etc. It is in the last phase of a battle, in the charge that finishes the fight and begins the pursuit, that the losses of the vanquished often

become greater than those of the victor, and that the disintegration of the units is accomplished and disaster is prepared.

In our own day the losses inflicted by the pursuit consist more in prisoners than in killed or wounded. These are the palpable signs of defeat; they may be more or less important, but that which actually makes the disaster cannot be weighed. It is the disintegration of units organised for fighting and forming front in different directions, which are unable to reassemble their scattered fragments and, pressed by the enemy, escape from all superior control. It is also the exhaustion and demoralisation of the soldiers, the loss of all confidence. These are the most important results of defeat, by the greatness of which we may measure the disaster.

An army may, as at Malplaquet, have sustained enormous material losses but, the enemy not having acted in a manner to disorganise it, to break it up, to put it into disorder, it is able to leave its positions quietly, to execute its retreat proudly, and to retain the hope of achieving a speedy success.

At Eylau the Russians lost 32 per cent. of their effectives, but their units were not dislocated, their army was not disorganised. They retreated with the hope of soon resuming the offensive. The victory of the French was but little accentuated. At Austerlitz, where the Russians lost only 14 per cent., their army was completely broken up and scattered: it was a decisive battle.

The disorganisation of the enemy's army is the essential aim to pursue in battle and it is often achieved by the victor at the price of material losses greater

than those of the vanquished. At Prague, in 1757, 64,000 Prussians beat 61,000 Austrians and won a complete victory; they lost 14,000 in killed and wounded, *i.e.* 22 per cent. of their effectives, and the Austrians lost 5,000 killed and wounded, or 8 per cent.

At Liao Yang and at Mukden the losses in killed and wounded are very much the same on both sides, which, since they were less numerous, gives 1 per cent. greater loss for the Japanese; but at Mukden the Japanese made 50,000 prisoners as a result of their turning movement.

So the victory is not always to him who has the fewest killed and wounded, and the defender too loses as much as the assailant. The difference in the losses of the two sides is made up above all of prisoners: the more the disorganisation of the vanquished is completed, the more he clings to his positions, the more widely the victor has manœuvred, the more energetically he has pursued, the greater will be the number of prisoners.

The number of prisoners taken in battle has been increasing: firstly, because in old days they killed instead of capturing; secondly, because in modern days manœuvres are conducted over a wider and wider area and pursuit is more vigorous. In return the proportion of killed and wounded to the effectives, and of these the proportion of killed, is continually diminishing.

In antiquity the beaten army often lost 80 per cent. killed. The victor lost few men. Taking the armies together, the usual proportion was 30 per cent. killed.

In the eighteenth century the losses fell to 25 or 30 per cent. in both killed and wounded. Examples :

Prague	.	.	Prussians, 22 per cent.	Austrians, 8 per cent.
Kolin	.	.	" 41 "	" 15 "
Zorndorf	.	.	" 30 "	Russians, 37 "
Torgau	.	.	" 27 "	Austrians, 31 "

This average drops considerably in the wars of the First Empire. Though there are still bloody days like Eylau, where the loss was 35 per cent., we find but 11 per cent. at Austerlitz, 14 per cent. at Wagram, 14 per cent. at Ligny, 24 per cent. at Waterloo. The average falls to 20 per cent.

At Sadowa the losses fell to 6 per cent.

They were from 17 per cent. to 18 per cent. in the big battles round Metz, and only 10 per cent. at Sedan. The average for all the battles between August 4 and September 4 was 10 per cent. ; that of the battles of the second part of the war was only 3½ per cent. This diminution is due to the difference in the value of the troops. The improvised armies of National Defence were not in a state to continue fighting when their losses had averaged 3½ per cent.

The fights in the Transvaal show analogous returns—3 per cent., 5 per cent., 8 per cent.

The battles in Manchuria, in spite of their great length, only show 13 per cent. at Liao Yang, 10 per cent. on the Sha-ho, 12 per cent. at Mukden.

In modern wars the proportion of killed to wounded is always about 25 per cent. Thus, instead of the 40 per cent. killed of the battles of antiquity, those of the eighteenth century only showed 6 per cent., those of to-day 2 per cent. to 3 per cent.

The duration of battles has greatly increased, while

the losses have diminished. Also the losses suffered in an hour's fighting are diminishing very rapidly. They were from 4 per cent. to 8 per cent. in the eighteenth century; 2 per cent. in Napoleon's battles; they varied from 1 per cent. to 2 per cent. in the wars of 1866 and 1870. In the battles in Manchuria this average falls to 0·1 per cent. or 0·2 per cent.¹

§ 4. THE DURATION OF ENGAGEMENTS AND BREAKING OFF THE FIGHT

The duration of an engagement, combat, or battle is a factor of the highest importance in calculations relating to operations. Of course a general can never foresee how long a combat will last, but he can try to form some approximate idea of it, based on the experience of the most recent wars.

The duration of combats and battles depends principally on the number of the combatants and the nature of the weapons. The more numerous the combatants are, and the wider the front over which the fight is spread, the more time is required to bring the operations to a conclusion. The greater the range and power of weapons, the more the reconnaissances and general preliminaries of the battle are prolonged, the more time will be required for the approach marches.

Thus the duration of battles is always increasing. It averages about five hours in the middle of the eighteenth century; Napoleon estimated it at six hours, but it greatly exceeded this figure in his last campaigns. There were battles lasting two days, like Wagram, the Moskowa, Bautzen, Leipzig, because

¹ Nearly all these figures are borrowed from Balck, "Taktik," vol. v. p. 82.

the movements preparatory to the decisive manœuvre could not be accomplished in a single day. The battle of Essling lasted twenty-one hours, and the average appears to be twelve hours, instead of the six indicated by Napoleon.

In 1870 great battles like that of Saint-Privat only lasted eight hours.

The battles in Manchuria were much longer ; the most important of them lasted several days. Their length was, however, exaggerated by including the days occupied by preliminary reconnaissances, but they lasted at least three or four days. At Mukden six days were required to execute the turning movements undertaken by whole armies.

In this respect ground plays an important part : the more difficult it is to traverse, the slower the manœuvres become.

The character of the leaders and the value of the troops also exert a most serious influence : the better victory is prepared beforehand during the course of operations ; the more skilful the general is in making his forces converge, in striking the enemy by surprise in flank ; the better the troops are officered, the more handy they are, and the more apt to execute the conceptions of the general with vigour and precision, the more rapid becomes the solution. With improvised, poorly officered troops the manœuvring is heavy and slow. The duration of a partial engagement, or combat, is a factor of capital importance in the plans of generals. We must know how long *given* troops can resist on *given* ground in order to know what manœuvre we can allow ourselves to undertake. The advance that should bring the manœuvring body of men into

play should be accomplished before the frontal engagement has come to an end, etc.

Each particular case must be studied separately. In some circumstances the occupied position is of such a nature that an indefinite resistance may be offered. This is what occurred in 1796 at the redoubt of Monteleghino, established on a narrow neck which the enemy could not outflank; this was also the case at the Bridge of Arcola.

On ordinary ground a body of men acting defensively and deployed in greater density than one man per yard, is able to resist a frontal attack by superior forces for a day. A turning or outflanking movement, on the other hand, would oblige it to retreat as soon as its flank was attacked.

To estimate the duration of a combat we must appreciate first the time necessary for reconnaissance and approach marches; secondly, the time necessary for outflanking movements.

For example, a very small unit with a front of $1\frac{1}{2}$ to 2 miles may be obliged to retreat in an hour or two. If it is able to protect its flanks, or cover itself by a watercourse, this period may be increased by reason of the time needed by the adversary for finding and forcing an unguarded passage.

A big unit, such as an isolated army corps, may offer resistance along a big front. If it holds 7 to 12 miles, an assailant, presenting himself at first on a similar front, would need from half a day to a day to outflank it. But if the assailant advanced at the outset on a sufficiently extended front to direct columns on to the flank of the defender at the same time as on to his front, the position would be evacuated in a much

shorter time. If it is a question of a whole army or even of two army corps, the engagement cannot be so sudden, the assailant takes greater precautions, reconnoitres more carefully; the defender, in his turn, is able to make more combinations and bring his reserves into play. Thus Napoleon usually coupled his army corps together in pairs so as to be certain that when one part of his army obtained contact with the enemy it would always give him a day for his general concentration, and he would not be crushed.

Thus we arrive at examining the conditions in which a body of men find themselves who, in order to gain time, are sustaining a defensive combat against superior forces. To what state will it be reduced by the end of the fight? Will it be able to escape, should the occasion arise, without experiencing a disaster?

If this body of men has been completely engaged, that is to say, if both artilleries have got to the point of firing at each other at effective range, the breaking off of the fight is almost impossible. To attempt to bring the teams up to the battery position and withdraw the guns would be one of the most dangerous possible operations. There is no solution but to hold on as energetically as possible till nightfall. If the decision is reached before the end of the day, it will be extremely difficult not to leave a great part of the artillery in the enemy's hands. When a body of men has been ordered to gain time by fighting, it ought not to allow an engagement to be pushed beyond a reconnaissance, or commit itself to an actual fight unless it believes it can hold out till nightfall. It should continue to slip away until the hour is late enough to enable it to sustain the contest till dark. This is the

way they behaved a hundred years ago, as is shown by the examples of Cervoni at Voltri in 1796 and of the Bavarians on the Isar in 1809.

§ 5. MORALE IN BATTLE

It is in the battle, the essential act of war, that moral forces act most powerfully and have their preponderant effect. We cannot repeat this too insistently. But whatever we may write about moral forces will not endow with them the man who has none. It is possible to write reams on the part played by decision, ardour, coolness, and all the qualities proper to a leader, but it is not of great profit to do so. We will confine ourselves to quoting a few important remarks of the masters on the action of the commander in battle.

Napoleon, following Frederick II., declared that there was but one way of fighting—to attack. In discussion this truth has seemed indisputable, and yet we have been able to prove that certain of Napoleon's adversaries sustained graver reverses when they had tried to attack than if they had remained on the defensive. On the other hand, Blücher derived great advantage from his bold offensive at Lützen.

It seems quite clear that such a method of action, which is to be preferred if one is more skilful and, above all, more resolute than the enemy, is disastrous for a general who is less skilful and less resolute than his adversary.

During battle, character is put to rude tests. Movements undertaken are checked by the enemy, demands for reinforcements come from all sides, the menacing advance of the enemy is reported. We must hold on, we must persevere with the manœuvres we have under-

taken, we must operate in such a way as to assure success by the employment of reserves. It is difficult to take suitable resolutions with all the speed desired; it is more difficult still not to lose one's head and not to despair prematurely.

"In war one sees one's own ills, and one does not see those of the enemy." ¹

There is in battle a critical moment in which the character of generals is more particularly revealed. Defeat seems complete; yet there are still reserves to be committed, it is still possible to grasp victory again. Prudent natures do not dare to use their reserves; they keep them for better times; yet Condé at Nordlingen and Bonaparte at Marengo would not accept defeat.

"Condé deserved the victory at Nordlingen because of the stubbornness and the rare courage that distinguished him. . . . Because, though it served him nothing in the attack of Allerheim, it prompted him, when he had lost his centre and his right, to begin the battle again with his left, the only body of men remaining to him. It is he who directed all the movements of this wing, it is to him that the glory of it is due. Observers of an ordinary kind will say that he ought not to have hazarded what was left, but to have used the wing which still remained intact to operate a retreat; but with such principles a general is certain to miss all the chances of success and to be constantly beaten. This is the way that Clermont reasoned at Crefeld, and Contades at Minden, and Soubise at Wilhelmsthal. The glory and the honour of arms should be the first consideration of a general who gives battle;

¹ Napoleon to Eugène, April 30, 1809.

the safety and preservation of the men is only a secondary affair. But also it is in this audacity, this stubbornness, that the safety of the men is to be found, for even if the Prince de Condé had retreated with Turenne's corps before reaching the Rhine, he would have lost all. It is thus that Maréchal de Contades lost in his retreat from Minden, not only the honour of his arms, but more men than he would have lost in two battles. The conduct of Condé then is to be imitated." ¹

It is by following this principle that Napoleon turned defeat into victory at Marengo, but into disaster at Leipzig and Waterloo. However admirable determination may be in a general, it should not be blind. It should not be unlimited, unless he has been forced to fight with no hope of victory, and is fighting for honour only.

"Keep these three things in mind—assembly of forces, activity, and the firm resolve to perish gloriously. Death is nothing; but to live, beaten and without honour, is to die every day." ²

¹ Napoleon, "Précis des Guerres de Turenne."

² Napoleon to Lauriston, December 12, 1804.

PART III
OPERATIONS

CHAPTER I

WAR IN FORMER DAYS

§ I. OPERATIONS AND BATTLE

WE have studied the battle in itself in order to learn its form and its development, to discover the causes of success, to appreciate the time and sacrifices necessary to obtain success according to circumstances, to imagine the situation of the two parties at the end of the struggle. But the battle is the decisive and characteristic factor of war, it is the essential agent of final success, and from henceforth we shall examine it from this point of view.

It is by means of battles that the goal of war is reached, or at any rate that we advance towards the goal. Operations in their entirety have for object the preparation of the battle for him who hopes for victory ; the exploitation of the battle for him who is victor ; the avoidance or the attenuation of the battle for him who fears the encounter ; the concealing and reconstituting of his forces for a fresh struggle for him who is beaten. *The thought of battle dominates all the operations of war.*

In the combat and the battle one can clearly distinguish two attitudes, offensive and defensive. The offensive is not less clearly accentuated in the opera-

tions taken as a whole, but it is not at all the same thing with the defensive. The term "defence" or "defensive"—if one takes, as one should always do, the ordinary meaning of the word—is only applicable to him who accepts the fight, and in it resists the aggressor, but the conduct opposed to the offensive also consists, and particularly consists, in avoiding or postponing battle. And this is what many military writers, for the sake of simplification, call the "strategic defence," but this abuse of words has its effect on ideas, and leads to inexact conclusions.

When one of the belligerents is convinced that for the time being he is the stronger, he longs for battle, he desires it, and he wants it to be as decisive and as prompt as possible. Most frequently he marches out to meet and beat the enemy as quickly as possible. As far as operations go, this is what constitutes the offensive.

At the beginning, or even during the course of the campaign, one of the two adversaries may be conscious of temporary inferiority. Then he seeks to escape, to postpone, or at any rate to minimise the decision, until the situation improves and enables him to take the offensive. It is very rare that an army makes war without any hope of ever gaining the advantage; non-offensive conduct should normally be considered as provisional.

During the course of the offensive it may be to our interest to postpone the decision in order to make it more complete, and again, in order to postpone the decision, it may be an advantage to give a hard push, to make a short-lived attack. Neither the offensive nor its opposite is always absolutely free from admix-

ture. Two adversaries may think at the same time that they both have superiority, and both rush to battle ; they may also both believe that it is to their interest to postpone the decision. The most striking example of this that we can give is the famous armistice of 1813.

The choice between the offensive attitude or the non-offensive attitude is, in principle, a question of strength, of superiority. It is obvious that we must not take material strength alone into consideration, but also the value of the troops and of the commander. Superiority may also be associated with local conditions, such as the geographical or military situation of the army. Thus in 1805 Napoleon judged himself to be in a condition to win if he stayed at Brünn and Austerlitz ; he could not risk going farther ahead.

Once a general is certain that he has superiority, he acts offensively, seeks as prompt and as radical a solution as possible, and demands of the art of war the means to accomplish his ends. For him who, on the other hand, feels himself for the time being the weaker, " the art of war consists in gaining time." ¹

Man, in perfecting his weapons, seeks to ward off danger ; he tends to prolong the preliminaries of action, and in the elementary combat procures ever-increasing resources for the defence. Now, by a singular contradiction, he thus finds himself favouring the attack.

The more the perfecting of weapons prolongs the frontal fight and allows of an economy of troops necessary to resistance, the more time and resources are available for turning movements and the principal attack. Progress in firearms invariably favours the

¹ Napoleon to Joubert, February 17, 1797.

offensive. As we follow out the working of this law through the centuries, we see the offensive disposing of ever-growing resources for imposing the decisive encounter on the adversary.

Two or three centuries ago the smallest obstacle enabled us to check the offensive ; to-day the offensive finds no barriers to retard its movements. The sudden change in this respect occurred during the second half of the eighteenth century as a consequence of tactical progress due to the musket.

§ 2. CAUSES OF THE TRANSFORMATIONS IN WAR

And so, from the highest antiquity till the time of Frederick, operations present the same character ; not only Fabius or Turenne, but also Cæsar, Condé, and Frederick, lead their armies in the same way. Far from the enemy they force the pace, but as soon as they draw near they move hither and thither in every direction, take days, weeks, months in deciding to accept or to force battle. Whether the armies are made up of hoplites or legionaries, of pikemen or musketeers, they move as one whole and deploy very slowly. They cannot hurl themselves upon the enemy as soon as they perceive him, because while they are making ready for battle he disappears in another direction.

In order to change this state of affairs we must somehow or other be able to put into the fight big divisions, each deploying on its own account, leaving gaps and irregularities along the front.

This, as we have seen, is what happened in the eighteenth century.

Up to the time of Frederick armies remained indivisible during operations : they are like mathematical points on the huge theatres of operations in Central Europe. It is not possible to grasp, to squeeze, or even to push back on some obstacle an adversary who refuses battle, and retires laterally as well as backwards. There is no end to the pursuit. It is the war of Cæsar, as it was that of Condé, Turenne, Montecuculi, Villars, Eugène, Maurice de Saxe, and Frederick. It is the sort of war that all more or less regular armies have made from the remotest antiquity down to the middle of the eighteenth century.

Battle only takes place by mutual consent, when both adversaries, as at Rocroi, are equally sure of victory, and throw themselves at one another in open country as if for a duel ; or when one of them, as at Laufeld, cannot retreat without abandoning the struggle ; or when one is surprised, as at Rossbach.

And certainly to-day, as heretofore, a general may refuse battle ; but he cannot prolong his retreat for long—it is the only means he has of escaping the grip of the enemy—if the depth of the theatre of operations is limited. On the other hand, an army formerly could retire laterally, and disappear for months by perpetually running to and fro, always taking cover behind every obstacle in order to avoid attack.

For the last half-century certain military writers have tried to see in the slowness of this sort of war the effect of a political system. They say that the sovereigns of those days paid their soldiers, and were afraid of getting them killed. They made limited war in order to conquer a fortress or a province, and ignored great war—national war, in which victory is a question

of life and death to a State. From this profound difference in the object of operations there resulted, according to them, a no less great difference in the manner of conducting the operations, and they conclude that if the wars of the eighteenth century were slow, and those of Napoleon startlingly rapid, it was so because in the former they had second-rate ends, "geographical objectives," and in the latter ardent passions born of revolutionary enthusiasm.

An absurd thesis if ever there were one! It would have been sufficient for these authors "to inquire," to learn that this sort of war was not peculiar to the seventeenth and eighteenth centuries; that it had been practised as long as there had been armies; that the generals of antiquity acted in no other way than those of Louis XIV., and that, moreover, they commanded *unpaid citizen soldiers* in the name of the Greek Republics, of Rome, and of Carthage; that Cæsar operated against Pompey or Afranius, as Turenne did against Montecuculi, and that, moreover, he was staking both his own life and the Empire of the world. They would have known also that the armies of Turenne, Frederick, and Maurice de Saxe were half composed of militiamen recruited by lot.

But without going back beyond the eighteenth century, have not they fallen into the absurdity of mixing up the Empress Maria Theresa with the Grand Duchess of Gerolstein? How can they believe that that energetic princess, or Frederick, William of Orange, and Louis XIV. would by choice practise a sort of watered-down war; that they would go to the enormous expense of raising and arming troops to get nothing out of it, and that if they had known a way

of crushing their enemy more promptly they would have hesitated to have recourse to it? Remember that it would have been enough for one of the sovereigns of those days to betray the tacit pact attributed to them to achieve more power and glory in six months than Napoleon did in ten years.

There was a simple way of avoiding so many mistakes, and that was to go and spend a few hours among the public archives, or even to read a few pages of the political correspondence of Richelieu or of Frederick, when the sentiments that animated the rulers of those days would have been seen, as well as the motives that inspired the conduct of their generals. And it would also have been seen that governments, far from inculcating generals with dilatoriness, were perpetually reproaching them for it.

What we are concerned to establish is that the methods of war have not been determined by its general character, but that it is the methods which have at all times given its character to war.

Neither the handling of weapons nor the science of marches derives from the general character of the operations; on the contrary, weapons determine the manner of fighting and the evolutions; from this result the general structure of the battle, the form of the manœuvres that prepare it, and finally the general character of the operations—the physiognomy of the entire war.

With primitive weapons war is relatively slow; the more weapons are perfected, the more promptly and easily does it become decisive, because the assailant must of necessity dispose of more powerful means in order to impose battle on the defender.

§ 3. THE CONDITIONS OF WAR IN EARLIER TIMES

These means were not possessed by any general of antiquity or of the seventeenth century. On an ordinary theatre of operations it was already almost impossible to come up with one's adversary if he were slipping away. But it was quite another thing in a prepared theatre of operations like the Flanders of Vauban, furrowed by a network of rivers and canals, with fortresses at all the junctions. What could be done then? There was nothing to be gained by pursuing the enemy without pause; after ten years of it one would have got no farther. A skilful general, while keeping the enemy under observation, will proceed to what may be called "works of approach"; the country is quartered by canals—he will seize each square successively, besieging and taking the fortresses that enclose it; he will possess himself of the essential points of the country, of the bridges and the defiles, and where this is impossible he will carry off the corn and forage. He will thus restrict his adversaries little by little into a closed area, where at last they will be obliged to accept battle.

Can we any longer be surprised at the importance acquired during operations by secondary objectives, the war of sieges, convoys, supplies? Can we be surprised if habits of slowness and slackness become the rule? Can we imagine what in the hands of a Villeroi or a Soubise becomes of an instrument which was already so heavy in the hands of Frederick?

The tyranny of the administrative services has been spoken of. The magazines and convoys are supposed to have retarded the operations. It is

certain that formerly the subsistence of troops demanded much more care than it does to-day, precisely because of the long halts made by armies in the same region, which prevented them from living on the country. But never did a general of any value at all allow himself to be guided by the consideration of his magazines; never was any system of war based upon them. In order to compare ancient and modern war we must not represent the one by Soubise, the other by Napoleon.

In the wars of former days revictualling was carried out in the most diverse ways: Cæsar's legionary carried corn for seventeen days, and the legions were followed by a convoy which carried thirty days' supplies, and was renewed by purchase or requisition. Sometimes the corn came by land or by water from the base; sometimes it was seized on the spot. During the Thirty Years' War the Swedish troops used all means of supply—local purchase, movable magazines, stationary magazines, and even requisitioning from the inhabitants.

During the campaign of Louis XIV. in Flanders, where the war of sieges becomes of preponderating importance, it is necessary to subsist on stationary magazines. It is the same during the War of the Austrian Succession; it is the theatre of operations that imposes the method. Moreover, the magazines are filled by purchases or requisitions made in the country.

If subsistence plays such an important rôle in armies during the Seven Years' War, it is because the service of supplies is directed by a man of great ability, Pâris-Duverney, while the generals are nothing but

puppets. It is a question of men, not a question of systems.

Frederick at the same time used stationary magazines prepared in great numbers in fortified places, and mobile supply columns. This double organisation gave him complete liberty of action.

To sum up, the ways of revictualling an army have continually varied, and the method of war has remained the same ; a war is always slow in which we know that the battle will be decisive and is so important as to be only accepted voluntarily ; a war in which the weaker can avoid battle indefinitely, and where the stronger is obliged to content himself with only partial successes and small advantages while waiting the opportunity of pushing the enemy back on to some insurmountable obstacle.

The rôle played by natural obstacles is considerable in ancient war ; in antiquity, as we see by the examples of Cæsar, a marshy depression was enough to put a body of troops out of reach. When firearms acquired a greater range, and above all a more rapid rate of fire, obstacles had to be of a more serious nature. In the eighteenth century the musket and the gun rob all obstacles of their value from this point of view, except escarpments, and above all rivers. In our own days great watercourses alone offer shelter from attack. The progress in weapons in this, as in other things, is always favourable to the offensive.

Fortresses also are of capital importance in wars of former days. Weapons are not powerful enough to admit of local levies clinging to localities, and holding a defile or a bridge for long. There is no other way than that of establishing a fortified post. Hence,

right up to the wars of the seventeenth century, the great number of forts, of isolated towers, of little places and of castles. The most superficial examination of the campaigns of Turenne show the rôle played by these little fortresses. Windmills and fortified houses are beginning to replace them. It was by holding these essential points with weak detachments that the armies of former days extended their action over the whole breadth of the zone of operations, as armies do in modern war by dividing themselves up and separating their divisions. What we to-day call the principle of *the economy of forces* was not invoked in former days, and Frederick, like his predecessors, confined himself to the advice "to make as few detachments as possible." This was the primitive form of this primordial principle, no less true in former times than to-day, but which would then have had no meaning in the form in which it has since been clothed.

Strong fortresses, we repeat, were of great importance in old wars. In mountainous or undulating country, such as the Alps, Jura, Vosges, and Ardennes, they hold all the defiles and all the cross-roads in the valleys; in the plains, as those of Flanders, they hold the junctions of rivers and the crossing points of canals. Thus in a mountainous or wooded country it is not possible to follow any natural path without knocking up against a fortress; in flat country it is not possible to cross any obstacles without holding the fortresses. In order that the assailant may oblige the defender to receive battle he must advance methodically, and conquer territory in sections one after another by possessing himself of the fortresses that command their boundaries. And so each campaign has for its object

the conquest of a fortress or a shred of territory. Sufficient unto the day is each day's labour. At the same time that fortresses serve to bar the principal roads of communication they are also employed to enclose magazines. Armies which move as one whole and often, under active generals like Turenne and Frederick, move from one province to another, need to keep sheltered in these fortresses supplies of all sorts, and even the *matériel* which they use for operations in the neighbourhood.

Then, as to-day, revictualling by convoys is impossible at more than five marches from the magazines; it is necessary then, if an army wishes to manœuvre, that it should find a fully supplied fortified *dépot* less than 60 miles away. This essential detail of ancient war will appear again transformed in Napoleonic war. In all ages vigorous pursuits have been rare, and above all it has never happened that the pursuit has been undertaken the same day as the fight. However, we find in the seventeenth century that astonishing pursuit which turned the doubtful victory of Wittstock (1636) into a marvellous triumph. In spite of this isolated example, pursuits are extremely rare.

It is feared in fact that troops will become disordered by pursuit, and that the enemy, rallying in part, may transform victory into disaster. It is also expected that a pursuit stopped by nightfall cannot be resumed the following day if the enemy has re-formed himself behind the smallest obstacle. When the pursuit takes place, it is in a single direction, by a disciplined and but little mobile army, and the vanquished quickly escapes from destruction. He is not outflanked or enveloped as he would be by the pursuits *en battue* of the Napo-

leonic age. Also, armies do not trouble themselves much about having their principal line of retreat behind them, and often fight with their backs to the enemy's country. If we pass in review the twenty-three battles of Frederick we shall find that one in four was fought in this abnormal situation, without the combatants concerning themselves about the dangers they may run or that they may make their enemy incur. The battle of Zorndorf is quite astonishing because of the *sans-gêne* with which the two enemies pivot around each other. The result was that the generals, Frederick as well as the others, chose the wing on which the principal attack was to be made for purely local reasons, with no thought for the operations as a whole. In order to understand Valmy, when two generals of the old school met—the French with their backs to Berlin, the Prussians with their backs to Paris—we ought to know all those battles of Frederick, so strange to our eyes. Valmy marks a new political era, but from the military point of view it is the end of a world.

CHAPTER II

MODERN WAR

§ I. THE ORIGINS OF MODERN WAR

WHILE Frederick carried the methods of earlier wars to the highest pitch of perfection, French generals were seeking for progress in tactical innovations. Being but mediocre in practice, they did not make their methods tell successfully in the Seven Years' War, but they prepared the materials which Napoleon was soon to put into use.

The first result achieved in 1760 by Maréchal de Broglie was that a column was able almost instantaneously to deploy on its head and that an army might march in several columns and promptly range itself in battle order as soon as its advanced guards had obtained contact with the enemy. This was immense progress emphasised by the fact that easily deployed columns may follow the roads and not tramp heavily across fields; and that armies preceded by sharpshooters and provided with artillery are neither stopped by woods nor by valleys. In this way all the formalism of earlier wars began to melt away: it was no longer possible to refuse battle by defying the enemy from behind a brook. There was no other way of avoiding

battle than by retiring straight backwards by the shortest road.

Besides this first step in progress others, depending also on the power of the new weapons, contributed in their turn to give a wider scope and greater rapidity to war.

In the seventeenth century armies could hardly occupy the theatre of operations except by means of little fortified posts ; meanwhile Frederick had begun to detach strong advanced guards on those river barriers beyond which he wanted to anticipate the enemy. The resistance of these big detachments was intended to give him time to come up.

Berwick and Villars had made this procedure usual, the former placing three army corps in the three big valleys of the Alps, the latter also dividing his forces in three corps on a front of 9 leagues between the Scheldt and the Deule. Maurice de Saxe had organised permanent *divisions* to march on Liège and Maestricht. The *divisional* principle which was applied intermittently by him was finally adopted in 1759 by Maréchal de Broglie, and the divisions of the army were partitioned out over a wide extent. Each of them was capable of receiving the enemy's first blow without being crushed by it and gain time for the others to come up and to manœuvre.

Thus *the army itself covers its flanks and its communications without devoting to this purpose any permanent detachments*. Above all it threatens the flanks and rear of the enemy and it limits the movements he is able to attempt. He either has to retreat by the shortest road or to accept that battle whose outflanking attack has already been prepared.

Guibert says : " If we are on the defensive, we must hold the issues or the points by which an enemy might encircle our flanks or advance on objects we cover. If we are on the offensive, we must hold the issues by which we can march on the enemy ; we must threaten the points that interest him ; finally, we must stretch out to enfold him."

The expansion of armies, thanks to the separation of the divisions, enables us continually to dislodge the enemy by a sort of drive, leaving him no alternative but that of battle or direct retreat.

" *It is necessary,*" said Chevalier de Chastellux, " *that the enemy should not be able to get past the flanks of the army and march upon its rear without an encounter and consequently without being obliged to fight.*" It is impossible henceforward to tack about or to disappear to one side.

And if this drive could be arranged in such a way as to press the adversary, not towards his own country, but away from it, he must be hopelessly lost. We can see the whole scope of this theory.

It will cause those battles with reversed fronts which were so common in earlier wars to disappear. Valmy will be the last of them. It will allow of forcing back and pursuing the enemy without intermission.

Soubise got safe and sound out of his ridiculous defeat of Rossbach, one of the most complete he ever received. Brunswick, abandoning his attack on Valmy, found no obstacles when he resolved to march round the French army and resume the road to Prussia, but after Jena the hunt goes on irresistibly and relentlessly, and leaves no way of escape. There is a complete change in war.

And from the beginning of operations armies extended in this way press the enemy and push him back into the snare. "*A skilful general,*" said Bosroger, "*from afar brings about a battle by other operations which force an enemy to do what he wills and make him, so to speak, come right up to the battlefield which has been prepared for him.*"

These great results are obtained by dividing the army into several corps, partitioned out on a much larger front than that of the actual order of battle. It is an immense advantage in the hands of a skilful and active general. But the dangers increase with the advantages; the instrument becomes by so much the more difficult to wield, and, the more perfected it is, the more hazardous to use. The divisional principle leads slow and clumsy generals to the system of cordons; that is to say, to armies glued down into a disposition too extended and too much divided up for a combined action.

Do not let us make any mistake; *the cordon is not so much a matter of the distribution of the troops as of the intentions of the general.* Was there ever anything more scattered than Bonaparte's army on the Adige in 1796-7? And can we say that they were *en cordon*, those troops which always found themselves concentrated on battlefields, at Castiglione, at Arcola, and at Rivoli?

Given that an army is *en cordon*, that is to say, divided up with no idea of concentration, it may happen that a more active enemy will crush separately the various portions of the cordon; or, if he also remains *en cordon*, one will get a series of partial fights instead of one decisive battle, and this new system,

which was to make war quicker and more energetic, makes it, on the contrary, slow and dragging.

This is what happened in the earlier campaigns of the Revolution ; for instance, in 1793, on the Saar, where four French divisions were face to face with four Prussian divisions. Or again, in Flanders or in the Vosges, one of the adversaries at last decides to concentrate his forces on one point to break the enemy's cordon ; only he takes so long concentrating that the enemy, put on his guard, follows his example. Thus a general action is arrived at, but without surprise or marked superiority on either side.

And so Guibert criticises " this fashion of never making war concentrated, of never operating with the whole army at a time, of never daring to fight great battles." He is tempted to adhere to the older methods, but reflection brings him back to the divisional system ; only " the art," he tells us, " will be to extend without giving an opening to the enemy, to enclose him without becoming disunited. . . . It is in this that the man of superior ability ventures more than the indifferent man, because, while he knows better the drawbacks of what he risks, he foresees, he plans, and he prepares both better safeguards and resources."

Mauvillon goes into the detail of these " safeguards " :

" All these corps must be in positions where they can maintain themselves against superior force for long enough to give one time to come to their help. One must therefore estimate the distance, the nature of the roads, and the means which the enemy can collect together to fall upon such a corps ; and those

means which we have at our disposal to warn us of such a design before the moment of its execution, etc.”

Bourcet says pretty much the same about it; he concludes that usually it is sound to limit oneself to a frontage of two marches, so as to be able to concentrate in one day. What neither Guibert, nor Bourcet, nor Mauvillon tells us, because there had been nothing to give them any idea of it, is the rapidity which must be infused into resolutions and marches to take advantage of these new methods. The troops will be continually in movement, whether they are concentrating for battle or separating after victory; and for the concentrations to take the enemy at a disadvantage we must make them suddenly, promptly, and secretly, and debouch unexpectedly with a whole army against one division.

On the subject of the subdivision of armies Guibert formulates an essential proposition: *no detachment should be permanent.*

Limitation of front is not enough to ensure concentration, and an army may be glued fast *en cordon* on a front of 4 leagues, if the intellectual inertia of its chief so condemns it, while another, by its mobility and its energy, will appear to be assembled, although extending over 12 or 15 leagues. In the former army every detachment is a permanency; in the latter even the most distant divisions will not cease to be integral parts of the main army, ever on the look-out for the order which will bring them to the battlefield. They have no permanent rôle which will keep them from marching to the sound of the guns.

“He who would retain the largest possible number of troops in hand will keep his army concentrated, and

will send weak detachments to guard some post or magazine; allocated to definite tasks, these detachments will remain tied to them on the day of battle. On the other hand, the general who distributes his army on a fairly wide front can by this very fact cover his magazines and communications without allotting to them special detachments. Less concentrated on the eve of the decisive day, he is more so at the critical moment. To sum up, war has its unavoidable difficulties to which one must bend; the only way to guard against everything is to spread out reasonably, with full knowledge of the situation, and the definite idea that the various portions of the army are not entrusted with special tasks, that they are but extended limbs which we shall suddenly close upon the enemy. *We must spread ourselves out so as not to make detachments.*"¹

§ 2. THE DETAILS OF MODERN WAR

The important change introduced into the operations of war brings with it of necessity a crowd of transformations in the elements of war on the one hand, and, on the other, in its general physiognomy.

Formerly armies moved as one block halting to take up their order of battle. Their movements were in no sense the object of any science or any very complex art. A bundle of tracks for the columns was picked out across country, their marches were started for them, and their camps were traced out. It was altogether a routine task.

The great movements of armies were the province of *strategy*; ² fighting and the dispositions for the fight

¹ Colin, "L'Éducation militaire de Napoléon," p. 63.

² In those days it was called "*stratégique*."

formed the objects of *tactics*. Thus there were two clearly marked parts in the art of war. Neither of them, moreover, called for much science or *technical skill*; what a general needed before the engagement was plenty of cunning and promptness in forcing battle on his enemy and in avoiding having it forced on him; in the fight he required capacity to take in a situation quickly, determination, and the gift of getting men to charge.

In the new war the same qualities will certainly find scope for their employment, but in a more technical manner. The dispositions to be taken, whether at the halt, or to move army divisions scattered over 12 to 15 leagues, demand much planning and calculation; all that estimation of distances and appreciation of the length of time bodies of troops can offer resistance, of which Mauvillon and Bourcet have sketched the details, become the everyday task of a commander. For the march of an army it is necessary to regulate the movements of divisions and army corps in such a manner as to be ready in every possible circumstance. These evolutions are the subject of absolutely new studies, which, for Guibert and Napoleon and their contemporaries, constitute *grand tactics*. This new part of the art of war takes its place between strategy and tactics. It melts into the one and the other. Strategy, which deals with the general control of operations, also touches the distribution of forces and the combining of movements regulated so as to obtain a predetermined result. On the other hand, grand tactics concerns itself with the combined movements which prepare battle, and also organises the march of divisions up to the ground where they become engaged;

the movement of the columns, when they take up the attack, is only a continuation of the approach marches.

Grand tactics is barely sketched out by the writers of the eighteenth century. It needs a man of genius to codify its principles, or at any rate to give a sufficient number of perfect examples of it to build up the science.

Alongside of this essential factor many interesting details are transformed or come into being.

When an entire army changed position at one and the same time, it was by no means difficult for the enemy to know its place. From one end of Germany to the other a general could keep himself quite adequately informed; he had only to collect the common rumours. Having got near his enemy, he kept him under observation by a few patrols of hussars, supported or not, as the case might be, by dragoons able to fight on foot, or by companies of irregular light troops suited to carrying out a *coup de main* and to holding strong and well-placed buildings, such as mills, country houses, etc.

Once armies are divided up into divisions, and are continually either broadening their front or narrowing it down, it is much more difficult to keep their movements under observation. The cavalry is continually in the field now in small groups, troops, or squadrons, and again in force with horse artillery and even infantry support to pierce the screen of the hostile posts.

When operating on the offensive during the wars of the Revolution, whole cavalry divisions were placed with the advanced guard in order to discover the

enemy's divisions ; but it is above all by spying that intelligence is obtained.

Little by little traditions and rules are established for the use of cavalry in the work of exploration ; but it is merely as regards the minor operations, the leading of a contact troop : it will be for Napoleon to organise the use of cavalry on a large scale.

Outposts also developed in a rapid and remarkable manner. Formerly they consisted of a few companies posted some 200 paces from the camps. Afterwards cordons were formed covering all the army's positions. In 1793 Brunswick established his outposts on a frontage of 26 miles from Deux-Ponts to the eastern slopes of the Vosges, where they joined up with the Austrian posts. Facing them, the French Army of the Moselle formed a similar screen. It was hoped thus to offer an impenetrable veil to the enemy's reconnoitring ; but in a few years' time it is recognised that the solution of the problem is much less simple than had been believed, and demands as much art as does the new method of exploration. Napoleon will be the first to show how, in extremely diverse circumstances, one should cover armies and ensure the secrecy of movements.

Between the operations of the armies of former days, marching in one single mass, following one single route, and those of modern armies, parcelled out in divisions, in which it is necessary to combine the movements of the columns, the difference is the same as that between a song following one single line of melody and an orchestrated work wherein the various parts are combined to produce a collective impression. No doubt it requires exceptional genius to produce work

worthy of admiration on the one system as on the other ; but the more complex modern work requires inspiration of a more scientific character.

To be performed it also required a conductor. The operations of modern war demand a Chief of the Staff. Of course, in the seventeenth century a general had at his side a *maréchal général des logis*, a *major-général de l'infanterie*, a *maréchal général des logis de la cavalerie*, but their duties were extremely simple ; it was merely a question of regulating the tracks of columns across country, and of ranging the troops in order of battle or getting the camps marked out. These duties have now become exceedingly complex, since it is necessary to ensure co-ordination in the movements of several divisions, maintain connection between them, obtain reports from them in time to be of use, etc. Thiébault's big book shows how in a few years the Staff formed itself. Napoleon found it already organised and working admirably, *and not seeking to go beyond its proper functions*.

The administrative services were to be deeply modified by the new system of war. When the army remained concentrated, and oscillated for a long time around the same position in an exceedingly restricted zone, it was necessary to pour into one single distributing centre, or magazine, supplies bought or requisitioned in an extended region. Of course, it was necessary to live on the country, for there is no other means of getting food.

Now that armies were distributed in divisions the commissariat had to multiply supply centres—this caused a slight complication ; but on the other hand the *commissaire des guerres* attached to each division

had only got a restricted zone to exploit, which made his task easier.

The provisions requisitioned were handed over directly to the troops, which made it more apparent to the historians that they were living on the country.

As a matter of fact this new organisation of the service, attempted during the later campaigns of the Seven Years' War, did not reappear at once in the Wars of the Revolution. In 1792-3 the armies were immobilised on the frontiers; when the service worked in a regular manner, the troops lived on magazines in the interior of the country; when it did not work, they pillaged. It was again this latter method which was more usually applied from 1794 onward, when pushing forward. The *commissaires des guerres* took a great deal of trouble to provide the soldier with his daily bread by regular channels, and very often they succeeded in doing so; but whatever we may do, *living on the country* must usually be translated by *marauding* and also by *dying of hunger*.

We are wont to say that generals are continually under the influence of the administrative services, and that their method of war is imposed by the conditions of supply of their armies.

It is thus admitted that, in modern wars, the dividing up of armies, what we call the divisional principle, has no other *raison d'être* than to facilitate subsistence. One must, it is said, divide to live, and collect together to fight. This is a mistake which we should avoid by studying in history the period during which armies began to subdivide *in order to manoeuvre*; the attempt was then made to adapt the method of supply from magazines to the new system of war. It is by degrees

that in the end it was abandoned in favour of living on the country, that is to say, distributing food requisitioned direct to the troops instead of collecting it into magazines in the first instance.

In default of historical researches we might satisfy ourselves by pondering over known events: was it to facilitate supply that Napoleon in 1806 directed Davout and Bernadotte on Naumberg, Lannes and Augereau on Jena; that in 1809 he moved Masséna on Landshut while Davout was fighting in front of Abensberg?

It is essential to state the fact: military considerations connected with fighting determine the broad outlines of every system of war; the method of supply adapts itself to those considerations and does not govern them.

§ 3. THE CHARACTER OF MODERN WAR

The operations of former days, with the impossibility which generals found of imposing battle on the enemy, the long periods of waiting, the sieges, the winter cantonments, imbued all generals and soldiers alike with habits of slowness and circumspection which perforce exerted an influence on the character of war. And besides, the impossibility of obtaining a definite solution to a campaign accustomed men to the pursuit of secondary objects, to set themselves objectives which were far removed, both by their nature and their importance, from the aim which one should always have in view, *i.e.* the ruin of the enemies' armies.

The new method of war upset all this, for it was war composed entirely of movements; the troops were to be incessantly on the march; combats would be

frequent. It tended to make commanders and soldiers alike active and enterprising both intellectually and physically.

It would be possible to impose battle rapidly by means of a skilful and vigorous offensive, to conduct operations vigorously, to neglect secondary objectives, or what modern criticism calls "geographical objectives."

Guibert foresaw in great measure the consequence of the new tactics: "A well-constituted and well-commanded army ought never to find itself before a position that stops it. . . . Any general who shakes off old-established prejudices on this count will embarrass his enemy, astound him, allow him no place in which to breathe, and force him to fight, or else to fall back continuously before him. I dare to imagine that there is a way of leading an army which is more advantageous, more decisive, more calculated to procure great success, than that which we have up till now employed."

And the artilleryman Du Teil adds "that the fate of fortified places will almost always depend on that of battles; *they are but accessories.*"

In former times sieges were undertaken in default of being able to deliver battle. Soon Napoleon will say, on the contrary: "No sort of siege must be thought of before a battle has taken place."

Nobody indeed ever mistook the final aim of war, but we are only now beginning to be able to aim at it and to attain it in a direct manner.

Unhappily for France this new war demanded a science of strategy, a greater *professionalism* in the higher parts of war than was needed in earlier wars,

and the French monarchy concerned itself but little with the training of officers or with preparing them for the higher commands.

Thus, when it was necessary to oppose the coalition in 1792, only one gifted but ill-trained man was to be found—Dumouriez—to sustain for a while the honour of our arms, and after his disappearance there was no one who was fit to command an army. And moreover there was no more talent to be found among the *émigré* generals than among the patriots. Soon, and in spite of the want of skilled generals at the head of the armies, a member of the Committee of Public Safety showed himself capable of imparting a new energy to the operations. He was an engineer officer, Carnot, endowed with vast intelligence, an ardent will, and like Bonaparte he had received a certain military training. He had an instinct for the new methods of war. He desired battle, and prompt and decisive solutions to be won by the same means that had been extolled by Guibert, Chastellux, and Boisroger. On March 11, 1793, he ordered Pichegru to prepare a decisive battle: "The Committee recommend you to prepare in silence this event which should decide the fate of the campaign. The sooner it can be delivered, the better, in order to forestall the assembly of the enemy's forces and such assistance as he may expect. The place you must choose for the battle is between the Lys and the Scheldt, so as to push the enemy back into the funnel formed by these two rivers, so that if he is routed he will have no means of escaping.

"The intention of the Committee is that you should leave to the enemy no time to breathe. We want to

finish it this year ; we must have the most offensive and the most vigorous of wars ; not to advance rapidly, not to have crushed the last four enemies between now and three months hence is to lose all. I repeat to you, in the name of the Committee and of the country, we must make an end of it."

On June 23, 1795, he writes to Jourdan : " The enemy must be pursued without giving him any breathing time and without amusing oneself looking for positions. Beware, my dear general, of assuming a defensive attitude. The courage of your own troops will weaken, and the boldness of the enemy will become extreme. It is necessary, I repeat to you, to fight a great battle, to fight it on the right bank of the Rhine, to fight it as near as possible to Dusseldorf, to fight it, finally, with all your strength, with your usual impetuosity, and to pursue the enemy without respite until he is entirely dispersed."

On October 22, 1793, the instructions to the Commander-in-chief of the Army of the North were these : " The Commander-in-chief of the Army of the North and the Ardennes will assemble all the troops at his disposal in order to strike a decisive blow, and drive the enemy in this campaign completely from the territory of the Republic. . . . He will surround the enemy, envelope him, and enclose him in that portion of the country which he has invaded, will cut his communications with his own country, and will separate him from his magazines, which are to be burnt if they cannot be seized."

We feel the spirit of the new war in all these orders—the spirit that should animate generals now that the divisional principle allows of widely extended opera-

tions, which force the enemy to battle and precipitate the decision.

Carnot, as a disciple of Guibert, incessantly recommends the assembly of forces and mass action as indispensable to decisive success. One constantly finds in his orders such expressions as "with all your forces," "assemble all one's forces," "carefully avoid the dissemination of your forces," etc.¹

But this is the intention, the desire ; in its execution Carnot is the first to order division, subdivision, dissemination. In the order of March 11, 1793, to Pichegru, he prescribes that a part of the army shall attack between the Lys and the Scheldt, while the other is to penetrate between the Sambre and Meuse, and a third part march upon Liége, without mentioning posts to be held between Bouchain and Maubeuge.

On January 30, 1793, he orders the armies of the Rhine and the Moselle to act in unison, but he does not place them under one command.

On October 22, 1793, while he orders Pichegru to assume a most energetic offensive, he advises him to hug the frontier and not to go far from fortified places.

In 1796 a general appeared who was capable of realising this vigorous offensive, this much-extolled mass action, and hardly had he won the victories of Montenotte, Millesimo, and Mondovi, than the Directorate wanted to divide his command and leave him but half his forces !

Alike in 1795 and 1796, in 1793 and 1794, the armies were divided up and acted without cohesion, and generals failed to understand Carnot's best plans.

¹ All that precedes this is based on Captain Dervieu, "La Conception de la Victoire chez les grands Généraux."

In 1793 our divisions were scattered from Strasburg to Dunkirk. Carnot ordered partial concentrations in order to save Landau and Maubeuge; he was misunderstood by Hoche and Jourdan, and was obliged to come and direct operations on the spot in order to assemble superior forces at Wattignies and Fleurus. In 1796 the armies of the Sambre and Meuse, on the one hand, and of the Rhine and Moselle on the other, not only had difficult lines of operations, but scattered their divisions and never had more than two in *general* engagements. This is the summary of the conduct of operations during the long wars of the Revolution; they were poor, as we see, in rational combinations and in vigorous movements. Although the troops soon became serviceable, the generals who sprang from the earth were more of the style of Soubise and Contades than of Villars and Berwick. As Rustow says,¹ "the result was that the new system of war showed at first nothing but its disadvantages." The chief innovation, the divisional principle, stimulated the energy and spontaneity of the French Army; but as a result of this very spontaneity, we see everywhere, carried to an extreme, that dangerous dispersal which the independence of divisions brings about. Generals were not yet inspired by the thought of Carnot: 'Direct those independent fractions on a single point.'

"We shall see things gradually changing, thanks to the genius of a single man, General Napoleon Bonaparte. He shows that it is possible to employ all the available energy of divisions and to make this multiple action contribute to a single end."

Napoleon laid down the principles and gave us the

¹ "L'Art militaire au XIX Siècle," vol. i. p. 110.

models of modern war ; in the war to come we shall assuredly have new weapons, larger masses, more efficient means of transport ; it will not be possible to apply the procedure of Napoleonic war without modifications ; some principles even may have become obsolete. Nevertheless, for him who knows better than to copy mere forms slavishly, it will still be in Napoleonic war that are to be found the models that should inspire, the subjects that should be meditated, and the ideas that should be applied in the twentieth century. There are operations more recent than Napoleon's, but they were executed under conditions very different from those in which we shall find ourselves in a future European war. Even the most modern features of these wars do not make them better examples for us than those of Napoleon, and cannot be put in the balance against the perfection of his operations. Therefore we shall dwell at length upon the principles and the procedure of Napoleonic war.

CHAPTER III

NAPOLEONIC WAR

§ I. THE PRINCIPLES OF NAPOLEONIC WAR : FORCE : UNITY OF ACTION

WHEN Napoleon entered the Royal Corps of Artillery, and later when he took part in 1792 and 1793 in the events of the first Revolutionary campaigns, he found the ideas and the methods of soldiers in strange confusion. Up to the middle of the century there had been a well-defined doctrine and method of procedure consecrated by long experience. It had since been recognised that these no longer corresponded to the circumstances of the time ; men began to do without them, though they had nothing solid or established with which to replace them. In the last campaigns of the Seven Years' War, as in 1792 and 1793, there was nothing but an illogical medley of old errors and new theories. Napoleon reduced to a system the methods sketched out in France before 1789 ; he regulated their use according to those higher principles which he determined by pondering on the wars of the past and the most recent literature on the subject.

In Napoleonic war we find various factors which combine to form a complete system :

(1) The *methods* in use in French armies towards

the close of the eighteenth century, the organisation in *divisions* distributed over a great extent of country.

(2) *The fundamental idea of all manœuvre*, that we must *take the enemy in flank or in rear*, and attack or menace his line of retreat as much as possible.

(3) *The principles* which, though true in all times, have become more particularly necessary since the tendency to dispersal has developed: on a theatre of operations it is necessary to have but one commander-in-chief, *one single army* acting with *all its forces assembled*—that is to say, in a fit state to be concentrated for the battle.

(4) *The qualities of execution*, without which neither principle nor procedure is worth anything: *rapidity, energy, resolution*, and—directing the whole—that colossal intelligence which has perhaps never been surpassed.

To summarise: Bonaparte found the older system of war, with its permanent concentrations, its unity of action, but also its slowness, its innocuousness, face to face with the new system of war, which allowed of the operations being vigorously pushed forward, but which endangered combined leadership, and indeed already had led to dissemination. He took from each what was good in it, combining the practice of divisional distribution with the principle of unity, and out of it he formed a complete system.

In the offensive, operations had for their object to hasten on battle, to win it, and to make it as decisive as possible. The principles and methods which Napoleon applied to operations were partly derived from those which he adopted for battle.

The first of all these principles is so simple that it

makes us smile, and quite wrongly so, for we continually lose sight of it in practice and in teaching ; it is this, that *victory is above all a matter of force* ; that *to win, we can never be too strong* ; that as many men as possible must be employed ; that *for the battle itself as many troops must be concentrated as possible, none must be neglected* ; "*victory is to the big battalions.*"

"This general principle once laid down and clearly admitted,¹ we see at once the character of extreme simplicity, which it brings into all the calculations of war, because one has made everything certain as soon as one has put oneself in the position to unite at each point forces equal to those of the enemy. . . .

"This simple and clear notion of numbers alone enables one to resolve, with the requisite neatness and precision, the principal problems that present themselves in war. It should serve as a point of departure for their examination, and it is only because agreement on it has not been arrived at sooner that so many false systems, so many refinements and subtleties have been introduced, in which the number of troops facing each other was the only thing of which men did not think. All those things melt away as soon as one reflects that there is nothing in war but *forces* brought into play, and that consequently everything which is not an active force cannot be accorded any sort of consideration . . . perhaps one may forge for oneself chimerical fears out of vague words, such as 'the enemy is to be feared,' 'the enemy threatens us in such a direction,' words which have no meaning when they are used in an absolute manner, because the

¹ "Principes généraux des Plans de Campagne," Paris 1895, pp. 93-8.

enemy is only to be feared if he is stronger than us. On the other hand, without taking any account of the relative strength of the armies facing each other, one may perhaps place vain confidence in useless and even dangerous complications, which lumber up so many treatises on the military art. Instead of all this, once one has accepted the simple proposition, that with equal numbers the chances are equal, one will at once deduce that there can be no fear in war save that of seeing numerical superiority with the enemy, and no more certain advantage than to give oneself this superiority. In the case of inferiority Napoleon knew how to exhibit the greatest prudence, and in the other cases it was the superiority of his own forces he relied on, and it was this that gave him absolute confidence as to the issue of the fight.

“In contrast to the far-fetched and complicated solutions and the subtlety of so many theoretical treatises, the Emperor’s plans are only distinguished by the greatest simplicity, because in order to resolve all problems and ward off all dangers he gives no other advice than that to make oneself strong enough to be superior in numbers in the given situation and at the given point.”

This first principle dominates all the others, and, when it find itself in conflict with them, annihilates them. It is in vain that Napoleon, perhaps for his own satisfaction as much as to edify posterity, tries to demonstrate that he always conforms to the rules of prudence; for him the first of all rules is to be the strongest, taking into account the value and number of the troops, and the qualities of the general. Superiority once acquired, he allows himself to be guided

by the consciousness of his own strength to reap the greatest advantage from it.

When, for example, he awaits the Allies at Austerlitz, exposing his communications with Vienna and Krems, and having no possible retreat across Bohemia, he does not doubt of victory.

When he marches on Jena and slips between the Prussian army and the Austrian frontier, any defeat would throw him across the frontier of this hostile Power. In the case of a reverse his army would be lost. This will not be so, because it is fated to win, and there is no other good reason.

The essential thing is to be the stronger, and one can never be too strong. While relying on his genius, Napoleon neglected nothing that ensured to him material strength; in other words, the largest possible number of men.

He leaves behind no body of troops capable of serving in the field; that is to say, armed, equipped, officered, and composed of men who are physically fit, even though they have no military training.

He hardly ever has a detachment in the open field; the country, like the *matériel* and the hospitals, is held by a small number of fortresses, and the garrisons of these are supplied by the *dépôts* and the hospitals. As soon as the *dépôts* assembled in a garrison are strong enough to form a detachment of 100 men he sends them on to the army. No one remains in the fortresses save workmen, invalids, convalescents, and national guards.

Amongst the fortresses occupied there is one which deserves special mention; it is that which contains for the time being the supplies and hospitals of the

army; Napoleon called it *dépôt, pivot, or centre of operations*.

Not only must we employ as many troops as possible in active operations, but also make of them *a single army*. If we have 100,000 men available and make two armies of them, on pretence of covering the frontier better, an army of the enemy of 60,000 men would undoubtedly suffice to beat our 100,000 men in two battles. Let us form but one army of 100,000 men, and not only shall we beat the enemy's army of 60,000 men, but we shall even be able to beat 190,000 enemies if they have made the mistake of dividing themselves into two armies. We must look to the end: two armies of 50,000 men each will cover the whole territory from incursions by parties of the enemy, but they would be beaten by the main body of the enemy's troops, and with them the national cause would in the last resort be lost. A single army of 100,000 would leave the frontier provisionally exposed over part of its length, but once the decisive victory has been won, it will be master of the situation.

We must continually repeat to ourselves and always come back to it: *Nothing in war is of any importance save battle*. All the incidents, the incursions, the partial successes, are devoid of interest except in so far as they contribute to success in battle, for he who is victor in battle will be master of the situation, and will at one stroke wipe out all the little advantages acquired by his adversary.

“Unity of command is the most important thing in war. Two armies should never be placed on the same theatre of operations” (Napoleon).

Here we meet with a truth which, in its general and

theoretical form, seems but too evident. As soon, however, as we pass to application, it is not understood by any one who has not meditated on it for a long time. In particular, sovereigns, legislative assemblies, and authorities capable of influencing the conduct of the war are apt to misunderstand this fundamental truth, and it is from this that the gravest military faults arise, reverses even, and the most complete disasters. It needs a great deal of reflection on the part of a sovereign, or by the members of a government, to realise that the security of the national territory does not exact from them the occupation of every point on the frontier; that it is far better assured by the *assembly of all the forces available in one single army under one single command* on the same theatre of operations.

The first thought of an ignorant or weak government, whether it be monarchical or republican, is to spread out its forces indefinitely so as to cover all parts of the frontier.

Austria and France acted thus in 1792. If one rises from this first conception (*territorial* defence) to the stronger and wider conception of *active* defence, there is still a step to be surmounted, and it is one which neither the Government of Louis XV. nor the Committee of Public Safety, nor the Second Empire (to speak of France only) could attain; it is to renounce the employment of independent armies on a single theatre of operations.

Napoleon I., on the contrary, is extremely precise on this point: there should only be one army on one theatre of operations, one single commander-in-chief using all the troops for a single end, making them

co-operate in the defeat of the enemy's forces, and their ruin by battle.

The unity of action of all the troops of which an army is composed manifests itself in Napoleon's eyes by *the unity of the line of operations*. We have already said what the *dépôt*, *the centre of operations*, of an army was. It is a defended town, containing all the supplies and the hospitals. The *line of operations* is the road which leads from the army to the centre of operations. It is obvious that the attention of the general was always turned to this side since all the supplies were collected there. There are disasters after which all is lost; on the morrow of a Waterloo, how little does the *centre of operations* matter? "Were you in the midst of your fortresses all is lost." But after some reverse that allowed of his continuing the struggle, Napoleon thinks only of fighting a new battle: repulsed at Caldiero, two days afterwards he takes his revenge at Arcola. Then it is that the general makes use of his centre of operations wherein he finds the resources necessary for a new battle. If it is necessary to beat a retreat, it would be upon the centre of operations.

In Napoleon's system of war an army would always have behind it a *place de campagne*, that is to say, a town fortified more or less summarily in a manner that ensures it against surprise, and this town serves as a centre of operations. Its park, its magazines, its hospitals will be *secure* and *assembled* therein; there is no need to cover the country with detachments to protect the sick and the supplies. After one battle we find there sufficient resources to fight another.

Now we can grasp the meaning of the Napoleonic

maxim, "*An army should not have more than a single line of operations.*" If in fact it had two different centres of operations for its right and its left, the army would not remain assembled when it had to beat a retreat. The attention of the general, as well as the army itself, would be divided between the two directions. No unity is possible without unity of the line of operations.

An army should have two or three fortified places available which may serve as centres of operations, but only on condition of using one at a time, and of having at any given moment one single line of operations.

The power of abandoning this line in order to take up another which abuts on to a different centre enables us to change the orientation of the campaign in a single day. An army in fact is deployed on a front appreciably perpendicular to its line of operations in order to cover this line well. If it changes its line of operations it will at the same time effect a change of front and take a new direction without exposing its supply columns or its magazines.

§ 2. THE ECONOMY OF FORCES

It is by battle that success is determined. Consequently we must engage as many troops as possible in the decisive battle. To leave nothing behind, to reduce evacuations and revictualling to a minimum, to hold the essential points in the theatre of operations as cheaply as may be—these are the means that Napoleon used in order to have as many troops as possible for the active army. But he always does it with judgment. He makes his dispositions in order

to diminish the secondary tasks, but he does not neglect such tasks as are essential. There is a minimum of strength which must be allotted to secondary theatres of operations and accessory needs. The just appreciation of this minimum and the just distribution of forces between the principal objective and the rest demand judgment, tact—in a single word, art, rather than a crude parsimony. To devote too much force to accessory needs is to enfeeble the army that is to deliver the decisive battles; to devote too little is to risk that this army should one day be taken in rear and deprived of its essential resources. The economy of forces does not consist in an exaggerated sparing of the forces destined to secondary objectives, but in devoting to each that which is indispensable to it. Skill consists above all in operating in such a way that the number of tasks to be fulfilled shall be as few as possible. From this point of view the divisional system gives great advantages. The armies of former days, which were always concentrated, were obliged to make detachments in order to hold important points of the ground, to cover their flanks, and to prevent the enemy from attacking their communications. A Napoleonic army, having distributed its divisions on a front of two or three marches, and having its supplies and its hospitals behind it at a place not more than five marches away, covers them sufficiently itself. All the divisions are an integral part of the army, and are to concentrate on the day of battle. They have no special mission. They may be in the first or second line, to the right, to the left, or to the centre, but they have received no mission as advanced guard or flank guard, and are not ordered to hold or to cover any

special point. The position which they occupy in the army as a whole acquaints them with the *provisional* rôles incumbent on them, until the moment comes when they are called into the general battle.

And another thing—an army deployed thus leaves very little ground outside its zone of action. The general having all his troops in hand is in a position to strike with superior force at whatever the enemy may detach against his flanks.

There have been, and there still are, theorists who want to hold troops in reserve until after the first battle. The Prussians in 1806 left a big army corps on the Elbe; and the French in 1870 had the idea for some time of leaving Canrobert's corps at the camp of Châlons.

When Bonaparte in 1796 had established himself in Lombardy, Austria did not in one swoop send against him the 80,000 men she was able to raise in three months. First it was Wurmser with 40,000 men; beaten at Castiglione, this general was preparing a new offensive with a few reinforcements when he was attacked at Trente and hustled by way of Bassano right into Mantua. Then it was Alvinzi who appeared with a new army; beaten at Arcola, having received reinforcements he was again beaten at Rivoli. However great the genius of Bonaparte, it is quite certain that he would not have beaten the Austrians if he had been attacked *at the same time* by all the troops which composed the successive armies of Wurmser and Alvinzi. Napoleon cannot sufficiently despise this manner of going on. "It is," he says, "the art of causing 180,000 men to be beaten by 140,000."

And yet it is what we did in 1870 ; our regular troops were beaten in Alsace and Lorraine ; an army of reservists was destroyed at Sedan, and the second line troops, which were considered unworthy of co-operating with the active army in the first fights, sustained the honour of our arms for more than six months. What would these three armies have done if united ?

This peremptory and terrible instance ought to have convinced all Frenchmen ; and yet there are still adherents of this fatal system, who make a distinction between armies destined to the first collision and those of the second line, people who would expose the active army on the Meuse and the reservists on the Loire to be beaten in succession.

It is necessary, said Clausewitz, to practise the economy of forces in space and *in time*—that is to say, we must employ as many troops as possible *at the same point and at the same moment*. Sometimes we achieve the first result, but forget the second.

§ 3. THE EXTENSION OF FRONTS. ASSEMBLY AND CONCENTRATION

It is not enough for Napoleon to assemble the greatest possible quantity of forces in the main army ; it is further necessary that these forces should take part in the battle. They must be used, disposed, and moved in such a way as to make battle as proximate and victory as certain and as complete as possible.

The divisional system, as we have abundantly proved, had for its object to assist in attaining this result. The army, distributed on a wide front, does not leave to the enemy the means of slipping away. Let the general but think of gaining the enemy's communica-

tions and succeed in doing so by his rapidity, and the latter is lost if defeated. It is a great haul like Marengo, Ulm, and Jena. Thanks to the wide fronts which he does not hesitate to adopt, Bonaparte gains much advantage from the divisional system in cornering his adversaries when they are at the last gasp.

In the month of April 1796 the 60,000 men of the Army of Italy were distributed over 75 miles; at the time of the passage of the Po the 30 000 men Bonaparte has at his disposal again hold 44 miles. Some weeks later he occupies the line of the Adige from Lake Idio to the sea, 100 miles, with 45,000 men.

Certain professors of tactics sometimes speak of the frontage admissible for an isolated army corps; here are some figures furnished by the ablest of the masters at a time when there were neither quick-firing nor powerful guns, nor smokeless powder, nor railways, nor telegraphs.

For General Bonaparte the frontage of an isolated army corps may be 50, 75, 100 miles. Add to this the fact that for certain authors, French as well as German, Napoleon incarnates the principle of extreme concentration.

From 1805 on Napoleon commanded 200,000 men, distributed in six army corps, a corps of cavalry, and the guard. No one till then had handled such masses thus subdivided.

In 1805 he assembled the Grand Army between Strasburg and Würzburg on a breadth of 125 miles; at the passage of the Danube it only covered 56 miles; it barely had to close in to fill all the space between Ulm and Munich, surround Mack, and make head against Koutouloff.

In 1806 the army assembled in the valley of the Main on a line 125 miles in length. Then, suddenly contracting, it closed in on a front of 28 miles to cross the Frankenwald ; on emerging it opened out to 37 miles and finally concentrated in front of Weimar.

In 1812 the frontage of the armies exceeded 250 miles. In 1813 it was about 63 miles a few days before Lützen ; it was more than 90 miles when Napoleon was operating around Dresden, making head against Blücher on the one hand and the Army of Bohemia on the other. It reached 180 miles if we take into account the corps detached at Hamburg.

Such are the frontages on which Napoleon spread his armies, whether they were armies of 30,000, 60,000, 200,000, or 400,000 men. That which at first sight may attract attention is that these frontages are pretty well independent of the numbers engaged ; *the entire theatre of operations must be held*, whatever may be the forces at one's disposal. It is the necessary postulate for stopping or driving back anything that may try to advance or to steal a march on one, and for readily reaching the enemy's flanks and protecting one's own.

Thus Napoleon, on the one hand, advises keeping the forces assembled and concentrating them all for battle ; while, on the other hand, he spreads out his armies on fronts of 35, 60, even 250 miles. Here, at first sight, is a glaring contradiction which it is necessary to reconcile.

Those writers who have not made a close study of the operations and writings of Napoleon, and whose whole intellectual equipment is limited to knowing some of his maxims, have fallen into a trap ; they

believe that Napoleonic tactics consist in always marching with a closely concentrated army. But, if they are read with care, the very maxims of Napoleon warn us of the distinction to be made :

“ The army must be kept assembled and the greatest force possible concentrated on the battlefield.”

One sees by this phrase that with a certain amount of subtlety Napoleon establishes an important difference between the words “ assembled ” (*réuni*) and “ concentrated ” (*concentré*). For him the army is concentrated when it is closely drawn together, “ like a battalion in the hands of a good major.” The word “ assembled ” is not to be used in such a case. The army is “ assembled ” so long as its component parts are so little separated from each other that the enemy cannot prevent their “ concentration ” or beat them in detail. From this it follows that in the neighbourhood of the enemy it is necessary that the different parts of the army should have but small intervals between them if it is to be “ assembled ” ; but when far from the enemy these different parts are still “ assembled,” although they are widely separated.

When, for example, in 1805 Napoleon thought he should encounter the Austrians in the heart of Bavaria, towards Munich, it was enough for him to direct the army from the camp of Boulogne upon Ulm by way of Strasburg ; and the armies of Hanover and Holland by way of Würzburg on Nuremburg ; the two portions of the Grand Army will draw near to one another between Donauwörth and Ratisbon in order to remain assembled ; but as soon as it is asserted that the Austrians are on the march for Swabia, and that one may expect to find them behind the Black Forest, the

Grand Army will not be assembled unless all its columns are sufficiently near together to support one another as soon as the Rhine is crossed. The bundle of columns is then tightened up between Spire and Würzburg.

From this example we see how the army finds itself really assembled, in Napoleon's sense of the word, in spite of this frontage of 60 or 120 miles, which at first sight seems to be incompatible with the idea of "assembly." The same fact will be established by the study of each one of Napoleon's campaigns. In those operations, bold as they were, and covering such vast areas, there is nothing to conflict with these principles.

The zone, very broad to start with, in which the army is distributed is gradually contracted. On the eve of the battle it is only 16 to 25 miles wide; the army then converges on the enemy, and finds itself quite simply disposed so as to enclose him between a frontal attack and a flank attack.

It is thus that on August 4, 1796, Sérurier's division finds itself in position to fall on the left flank of the Austrians next morning; that on October 12, 1805, when the army has spread itself out beyond the positions held by Mack, Soult is directed quite simply to the outside of the right flank of the enemy; that on October 13, 1806, Davout has only to continue his march on Weimar to fall on to the left flank of the Prussians; it is the same with Ney at Eylau, at Bautzen, etc.

To sum up, in the majority of the battles fought or planned by Napoleon, the converging attack is prepared simply by the previous distribution of the

army and, above all, by the breadth of the zone it occupies at the moment of advancing on the enemy.

This fusion of the battle with the operations as a whole is one of the most interesting results of the method of war inaugurated by Napoleon.

In the days of Condé, or of Frederick, two armies came face to face, deployed, and then, in order to fight, assumed dispositions quite independent of their former marches. Each made his effort at the point which seemed to him most vulnerable, without troubling about lines of retreat.

This is no longer the case in Napoleonic war. The battle is the focus where the broad outlines of the campaign converge. If, all things considered, it is advantageous to turn the enemy on the north and to drive him towards the south, the fight which will impose our will on him must be conducted in such a manner as to push him towards the south. All Napoleon's attacks are made in the direction indicated by the operations as a whole. Even when the ground seems to favour another solution Napoleon does not depart from this line of conduct ; at San Michele, for instance (April 19, 1796), although the Tanaro covers the left of the Piedmontese, it is there that he decides to attack them, so as to separate them from the Austrians, and, if possible, cut them off from Turin.

The movements being conducted on one and the same line of thought before and during the fight, the great operations quite simply prepare the manœuvre which will be carried out in the battle.

In 1806 Davout comes north of Jena by way of Naumburg in order to cut the Prussians off from Berlin ; in 1809 Napoleon debouches from Landshut

on Eckmühl to cut the Austrians off from the road to Vienna.

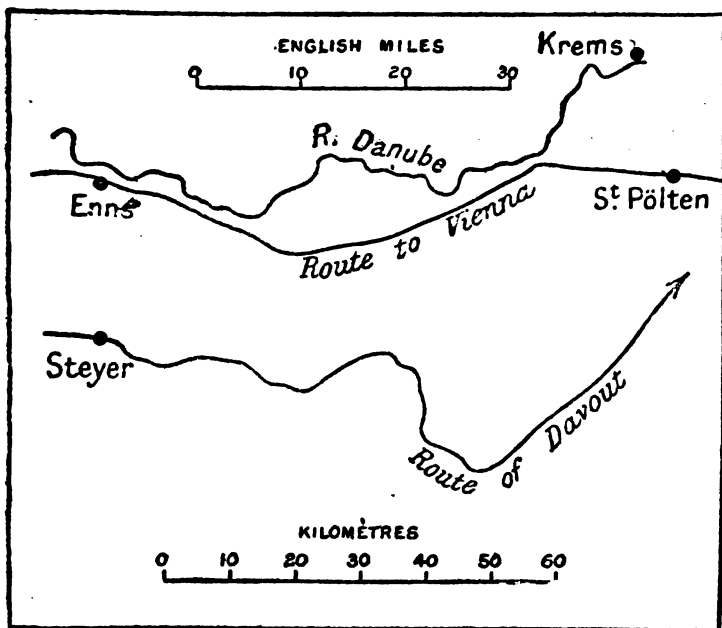
It may be argued whether Napoleon detached any corps laterally to a long day's march from the main body in order to produce this converging attack which is so common in his battles, or whether he contented himself with using in this way corps already detached.

Assuredly Ney before Bautzen or Eylau, Sérurier before Castiglione, Davout on the eve of Jena, etc., did not find themselves separated from the main body solely in order to be brought back into the hostile flank by a converging march ; but it is no less certain that in spite of the initial extension of his front it would have been very easy for Napoleon to proceed to a close concentration of his forces before attacking, a thing which he never did. He always regarded the converging attack, with the point of convergence beyond the enemy's front, as an extremely fortunate consequence of the initial deployment of the army. Finally, there is in fact an instance in which Napoleon showed clearly that he had broadened the zone of march of the army with a view to a converging attack (*e.g.* in November 1805, the detaching of Davout some 30 miles to the south of the army marching on Vienna.) Nor can it be disputed that Masséna in the case of Montenotte, and Davout in that of Eylau, were detached to a flank of the army without other reason than flank attack in the battle.

The procedure, then, which we see usually adopted is to deploy the army at the outset of the campaign on a front wide enough to comprise the whole width of the theatre of operations ; then, during the operations and up to the eve of the battle, to maintain fairly

wide dispositions for the march, or while remaining expectant, then culminating at last in a converging attack. Napoleon arranged ten or a dozen variations on this same type.

He takes advantage of the division of the army



into big formations which can hold their own for several hours, and he spreads them over the whole theatre of operations to surround the enemy. He controls this tendency to dispersal, *keeps the army assembled, and has only one line of operations.* This solution, which reconciles all the extremes, is without doubt the work of genius, which alone could evolve so perfect a system.

“One of the essential points of the science of marches,” writes Jomini, “consists to-day in knowing how to combine the movements of the columns well, so as, without exposing them, to comprise the largest strategical front possible so long as they are out of reach of the enemy. By this means one succeeds in deceiving the enemy as to the real objective one has chosen, and the army can move more easily and rapidly. But then it is also necessary to take measures beforehand for concentration to unite one’s masses when it becomes a question of a decisive conflict. This alternative use of wide movements and concentric movements is the true stamp of a great captain.”

The advantages which Napoleon obtained from extending his army over a vast space without ceasing to keep it assembled and ready to concentrate have never been sufficiently brought out.

His opponents more often feared to disperse their troops, and only formed them into one compact mass. If they gave way to the temptation of taking their enemy between two fires, they frankly divided their army into two masses separated by a big interval.

If the enemy formed but one mass, the French divisions enveloped him; if he divided into two corps, the French divisions, while making head against the one and the other, wormed themselves into the interval, maintaining the separation; then, in this central position, Napoleon operated by overwhelming the two hostile masses in turn.

Thus is produced the at first sight surprising result, that if the enemy’s army is in the middle of the French divisions, it is enveloped, whereas if the French army finds itself between the hostile masses, it separates them.

§ 4. SPEED AND SECRECY

The distribution of the divisions and army corps over a wide zone allows of bringing off out-flanking manœuvres. It also has the advantage of concealing the plans up to the last moment.

When drawing near the enemy, Napoleon deploys his army on a width of about two marches. He steals a march by effecting his concentration during the night, and falls unexpectedly on the selected point of attack. This is the case at Montenotte, at Castiglione, and at the crossing of the Po in 1796. Again, it is by night marches that Bonaparte concentrates on Arcola or Rivoli. "This is what contributed most to make Napoleon's attacks so overwhelming, those dawns of his victories. The evening before, the enemy has knocked up against strong detachments everywhere; he has pushed them back, but slowly, and does not know where to march. At all costs he bunches up. Where is Bonaparte? Where is the French army? Above all, where will it be to-morrow? And it is on this query that night draws her veil. At sunrise, here is Bonaparte! And while the divisions seen the previous evening renew the fight, suddenly guns thunder behind the Austrians, and they are those of troops believed to be 10 leagues away! It is Fiorella who has dashed in from Mercaria to Solferino, Masséna from Rivoli to Mantua. It is, in one word, systematic surprise obtained by extension of the front and by night marches, and made terrible by those guns heard suddenly in rear in the morning mist." ¹

The rapidity of the marches made it difficult for

¹ Colin, "L'Éducation militaire de Napoléon."

spies, as well as for cavalry, to keep them under observation. The complexity of the combinations baffled the observers. When in 1800 the "Army of Reserve" came down into Italy, generals used to the soporific methods of the Armies of the Rhine felt a sort of bewilderment.

"We who fought in the Armies of the Rhine, whose divisions went at the accustomed pace, moving methodically from one position to another, we could not conceive how the Army of Italy could make these enormous numbers of prisoners. . . .

"Its columns were formed of unequal divisions. At one moment, directed on all the issues, they there showed their menacing heads; at another moment, concentrated rapidly on a single point, like torrents they bore down everything in their way. Ever on the move or in action, they alarmed, harassed, and destroyed their enemy before he had time to learn the numbers, the intentions, and the dispositions of the troops with whom he had to fight. . . .

"This fashion of making the marches of the divisions irregular had the advantage of rapidity in movements and of baffling the enemy's spies; for, let us say that an intelligence agent of General Melas¹ has left Milan to make his report two days after our entry there. What could he have seen? What could he report? The French army was almost entirely between Milan and Lodi; the advanced guard had already crossed the Adda and was moving on Crema. But in a day the scene had changed."²

The new method of war, which derived all its value

¹ The Austrian commander.

² General Duhesme, "Essai sur l'Infanterie légère."

from the incessant movements of expansion and contraction of the divisions, is above all a war of movements, and requires that these movements should be conducted with the greatest briskness to reap all the advantages which they can give. When, for instance, Broglie in 1760 and Carnot in 1794 concentrated several divisions on one point, they did so with the intention of attacking the enemy with superior forces; but, operating slowly, they disclosed their plans and allowed the enemy to make a similar movement.

Bonaparte, on the other hand, had prepared his plans well in advance; the right moment having come, he carried them out in an apparent disorder which ensured secrecy, and with a rapidity which was withering. He attached capital importance to this rapidity; without it, in fact, all plans fail, and one always finds oneself evenly matched.

Later on he will say: "One must always prefer the thunderbolt to the gun whenever one can.

"One must be slow in planning and brisk in execution. The art of war consists in a well-thought-out, extremely circumspect defensive, and in a bold and rapid offensive."

When Beaulieu and Argenteau attacked the French, on April 11, 1796, they anticipated meeting the divisions separated; they were so in fact on the 11th, but on the 12th almost the whole of the Army of Italy was to be found opposed to Argenteau.

In 1805 Mack was discussing what the French could do, when he learned with astonishment that there were 200,000 men in his rear. In 1806 the commanders of the Prussian army deliberated how to attack, how to defend, how to counter-attack; they

were just about to take a decision when they were informed that Lannes before Jena and Davout at Naumburg were within sight of their outposts.

Need one speak of 1814, the thunderbolts of Champaubert, of Montereau, of Craonne ?

Rapidity is an essential and primordial factor in Napoleonic war. Without it there is neither method nor principle which holds good ; the best-conceived plans will only result in a disaster. If we take any of the most brilliant of Napoleon's projects, and compare with them the corresponding plans of his adversaries, we hardly perceive any difference. What decided victory was the manner of execution, promptitude in resolutions and in movements.

It is, above all, in manœuvres about a central position that rapidity in movement is useful. This it is that makes it possible to face two adversaries in turn. At certain moments this rapidity is such that the marches of some units escape the historians.

What is there more wonderful than Masséna's division, in the month of January 1797, brought from Castelnovo to Rivoli, fighting all day, and marching again all the night to crush Provera under the walls of Mantua ? "Energy, energy, speed !" is the war-cry of Napoleon. It doubles the value of his army, where mass is multiplied by speed, as in the momentum in mechanics.¹

"Movement is the soul of Napoleonic war, just as the decisive battle forms its means. Bonaparte makes his troops move with a calculated rapidity.

¹ It will be noted that Napoleon, as a mathematician who knows the value of expressions, says *quantity of motion*, and not *live force*. Many writers have misunderstood him.

... Multiply themselves by speed . . . make up for numbers by the quickness of marches, are maxims continually on his lips. 'Marches,' said he, 'are war . . . aptitude for war is aptitude for movement . . . victory is to the armies which manœuvre.'"¹

And this is what his soldiers mean in saying that he wins his battles with their legs. It is after the operations of Ulm that they make this remark, and it does not bear upon the direct march of a few days from the Rhine to the Danube; it is called forth by the movements around Ulm, the immense circle which Soult describes by way of Augsburg, Landsberg, Memmingen; the continual going to and fro of Ney from one bank of the Danube to the other, from Albeck to Gunzburg, from Gunzburg to Elchingen. Those are the marches which are characteristic of the system, and outnumber the sum total of marches involved in the old form of war.

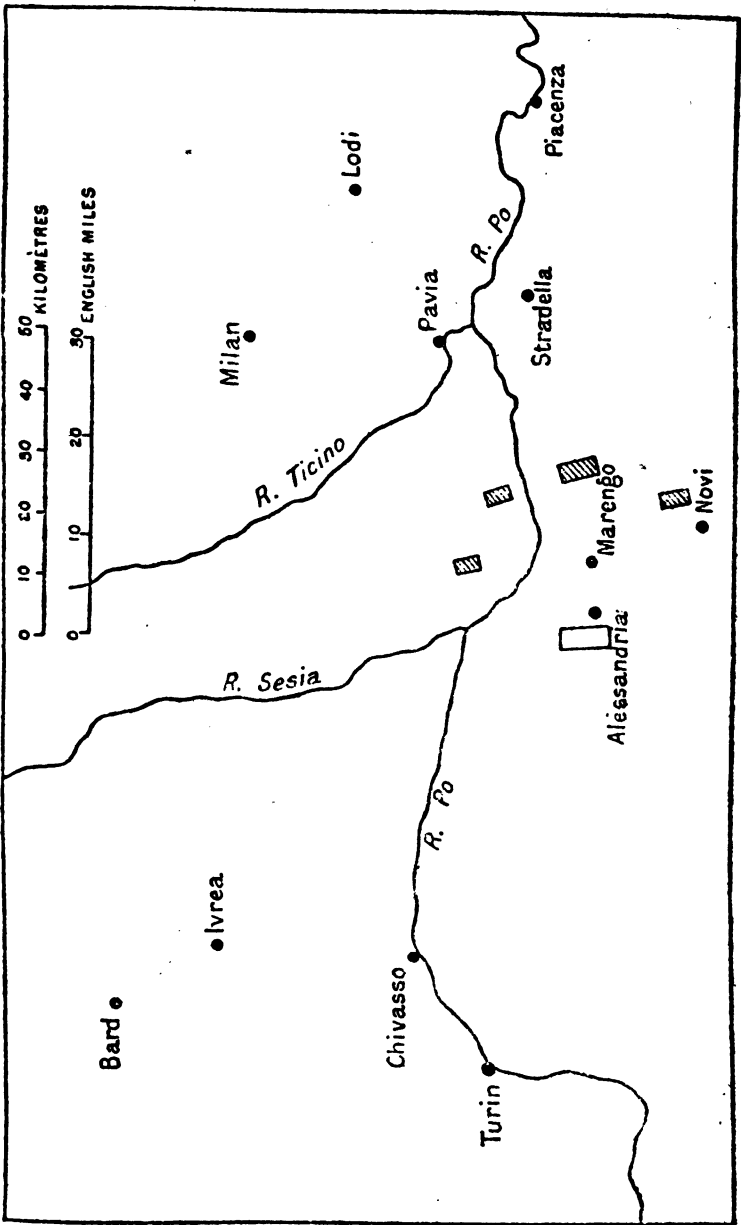
On the subject of this promptness in movement there is one essential observation to be made. No doubt marches can be forced, and Augereau between July 29 and August 2, 1795, and Masséna between January 13 and 17, 1797, pretty well doubled the average. It is the same with Davout hastening from Vienna to Austerlitz in 1805, and Masséna and Oudinot summoned with all speed from Augsburg towards Landshut and Eckmühl in 1809. But if Napoleon sometimes used exceptionally long marches to hasten an especially important manœuvre, it is not to them that he owes the remarkable rapidity of his operations, that incessant activity which led him so quickly to

¹ Cte. Dervieu, "La Conception de la Victoire chez les grands Généraux."

decisive solutions. There is a certain length of march which troops hardly ever exceed, and the movements of armies are made at a rate of 10 to 12½ miles per day. A given general with such marches will not succeed in drawing nearer to his goal at more than a few miles a day; it is the case with Moreau in 1796 and 1800, who displaces his army without making it advance. Another commander will foresee long beforehand both the goal he must attain and the incidents which may arise. The indifferent general proceeds by fits and starts, each day solving a problem and passing clumsily from one problem to another. By amazing calculations Bonaparte combines the movements of his troops in such a way as to bring them by the shortest road to the final situation he desires, and at the same time he regulates the daily marches so as to be able to deal with all the incidents which may arise. The movement of the Army Reserve from the Saint Bernard to the Stradella, and that of the Grand Army from the Frankwald to Jena, are marvels of their kind.

In 1800, at the exit from the Saint Bernard, Murat is directed on Lodi; Lannes, it would seem, is to follow the course of the Po. With a word Bonaparte alters everything; a simple change of front to the right, and here is Murat occupying Piacenza, Lannes possessing himself of the Stradella, and drawing on Victor after him. "Thus," exclaims Duhesme, "the army found itself in column reversed, on the road to Alessandria; Loison's division, which at first had seemed to be the advanced guard while marching on Mantua, covered the rear of the army and acted as a rear-guard.

"These movements may appear simple and easy,



and indeed they do partake of this character, which is that of all things fine in quality ; but the march of an ordinary, although well trained, general would have been very different. To begin with, he would have waited at Ivrea until all his divisions had debouched to put them in line, which would have demanded a great deal of time. And as his object was to go to Milan, there to effect a junction with the divisions which General Moncey was bringing from Switzerland by way of the Saint Gothard, he would have marched methodically, his right on the Po, his left in the foothills of the Alps, at first behind the Sesia, then on the Ticino, and thence to Milan, and finally partly on the Adda and partly on the Po, behind which, deployed in order of battle, his army would have awaited the arrival of Moncey's divisions to enable it to move forward to the assistance of Genoa. Did he wish to make the march of his columns irregular ? He might perhaps do worse. Let us make no mistake about it ; to combine the march and interplay of these columns, which seem to operate in every direction, and yet, however, must tend to one and the same goal, requires a depth and breadth of calculation of which all minds are not capable, and in trying to avoid routine one might often fall into confusion."

In the same way, in the Jena campaign, we see the Grand Army marching straight before it in three columns, as if its one object were to get to Berlin by the shortest road ; and all of a sudden it turns in a right angle and finds itself concentrated at the point determined for the battle. It then appears that all the marches ordered from the outset tended directly to this result.

Thus one must conclude that rapidity in operations does not consist in making the troops perform long marches which break them down; the commander obtains this rapidity when he has the fixed determination to act, when he knows what he wants, when he has weighed the means of attaining his end, and moves on it steadily, without losing by hesitation or mistakes any of the $12\frac{1}{2}$ miles a day which his columns can do.

§ 5. GRAND TACTICS

The more profoundly we study one of Napoleon's operations, the more we are filled with admiration; but what astonishes us most is the characteristic which his dispositions possess of being adaptable to all circumstances. They are never taken with a view to meeting one single case, nor even several specific cases, but are conceived in such a way as to answer every new situation as if it had been the only one foreseen.

A disposition made by Napoleon never compromises the future, never restricts his liberty of action. This remarkable suppleness is due above all to the intervals and distances left between units, and to the form of the grouping of units, which offer straight fronts to all the directions which are of importance.

If we could have the assurance that the enemy will not stir during the whole of the time we are marching towards him, it would be enough to direct the various portions of the army on to the most favourable positions for giving battle; but this is a situation in which we never find ourselves. We have against us a living enemy, who will perhaps make

mistakes, but who almost certainly will move and try to manœuvre. For the operation as a whole, as for the daily positions of the troops, it is therefore necessary to have, not a rigid plan, but, as they used to say in the eighteenth century, a "plan with several branches," that is to say, with several variations answering to what the enemy may do; the disposition of the army for each day must admit of choice from among all the variations for the morrow.

Certain generals, before and after Napoleon, have striven to anticipate the operations their adversary would undertake. They have worried themselves a good deal over this effort at divination, trying to find out from among the enemy's possible operations those which would be most dangerous or most probable, endeavouring to picture them to themselves in all their details. Napoleon, on the other hand, like Descartes, finds a formula for the possible variations, and this is much simpler. For instance, let us follow his calculations for the campaign of 1805 in Moravia, according to the notes he has published. The Allies are at Olmütz; they will not remain there for ever, and when they move, it will be either to go farther away or to take the offensive. In either of these "general ideas" they may effect their movement on the straight line which is nearer to or farther from the French, or they may move to their left or to their right. Thus there are six cases to be considered which cover all the possible hypotheses; and in his calculations Napoleon provides for what he should do in each one of these six cases.

Is he undertaking active operations? He reasons just the same and never discards any hypothesis,

however unlikely it may seem. Here is a striking example : In 1806, as soon as he has crossed the hills of the Thuringian forest, and is marching so as to attack the Prussians while cutting them off from Berlin, he thinks of all the movements they may make, whether to come towards him or to retire. If they do not seek for battle, they may try to retire towards the west or south-west—this would be of little interest, and demands no special provision ; or they may move towards Magdeburg, or file past the French army towards Naumburg and the Lower Saal. This would seem to cover everything ; but Napoleon neglects nothing. He also provides for the case, hardly imaginable, of the enemy trying to slip by behind the French army to reach Dresden by way of Saalfeld and Hof.

Thus he was wont to neglect no hypothesis, and to pass in review, so to speak, the complete series of cardinal points.

The hypotheses having all been considered, Napoleon takes his dispositions in such a way as to be able to manœuvre in every situation.

The above makes known to us the results Napoleon set himself to attain in his operations :

(1) To have his troops sufficiently assembled to be able to concentrate them on the battlefield.

(2) On the eve of the battle, to be spread on a front sufficiently wide for a portion of the army to come in on the enemy's flank.

(3) To be always in a condition to change his dispositions to meet the unforeseen.

(4) To conceal his plans.

Napoleon achieved these results by combined move-

ments of his columns. These combined movements are the subject of grand tactics. The Emperor is doing grand tactics when he calculates the marches of his divisions or army corps in such a way as to *concentrate*, to *outflank*, to *manœuvre*, to *effect a surprise*, or to *guard against the unforeseen*.

One must not hope to get from him formulæ for this the most difficult part of the military art—that which most requires personal gifts, and in which neither science nor a comprehensive mind is sufficient—that part of the art of war which most needs imagination and the creative faculty. Lannes had most brilliant qualities—he was admirable in a fight; with a wonderful perspicacity he could pierce through the movements and plans of the enemy, perhaps even better than the Emperor; but he was not yet skilled in grand tactics, Napoleon used to say; perhaps he might have become so. Aptitude for manœuvre is for a general the supreme skill; it is the most useful and the rarest of gifts, by which genius is estimated.

We give way to a curious illusion when we try to sum up this art—the most delicate of all arts—in a more or less puerile formula; when, confusing higher geometry with mathematical drawing, we offer a straight line, a square, or a diamond as the normal formation of armies operating. Any theory which results in such solutions by that very fact alone shows its inadequacy. “If such questions had been set to Turenne, Villars, or Prince Eugène they would have bothered them considerably,” says Napoleon on the subject of some special situation. “But ignorance has no doubts; it wants to solve a problem of transcendental geometry by a two-dimensional formula. All

these questions of grand tactics are problems of physico-mathematics with indeterminate elements, and cannot be solved by formulæ of elementary geometry."

We cannot dream of codifying grand tactics, of reconstituting the system of principles and methods which Napoleon applied; but a brief study of his operations may provide us with important conclusions and permit us to throw some light on a subject hitherto too much neglected.

(1) The army must remain assembled, able to concentrate for battle. On the eve of a battle Napoleon means to have the bulk of his forces strictly concentrated. The remainder, comprising one or two large formations (these were divisions in 1796 and 1800, army corps under the Empire), may find itself more or less apart on one side in order to move against the enemy's flank, either by a night march or during the battle itself. Thus, on the eve of battle, the zone over which the army is spread may be from 6 to 20 miles long and of but slight depth ($7\frac{1}{2}$ miles at most).

During the preceding days this zone may be longer, and indeed it must be so. *A certain extension of front is necessary to ensure a rapid concentration;* for, to put an extreme case, if the whole army marched on one and the same road it would require more than four days to concentrate. At the beginning of the nineteenth century roads were fairly scarce, and it was necessary as a rule to reckon on 10 to 12 $\frac{1}{2}$ miles' interval between two parallel routes. The Grand Army of 1805 and 1806 had to form in *at least three columns* and spread over *a front of nearly 20 miles* in order to concentrate in one day.

In every special case it is necessary to take into account a host of circumstances. The general regulates the distances and intervals between his larger formations, taking into account the network of roads, the distance of the enemy, and the obstacles which the ground offers to the movement of both sides longitudinally and laterally. He also takes into account the tactical methods of his adversary and his aptitude for manœuvre. Two days before Austerlitz the Allies were only 32 miles from Napoleon, and Davout had nearly 70 miles to do to come up to him.

Usually the zone in which the army is spread some few days before the battle may be from 20 to 40 miles in width and depth.

(2) If one had only to anticipate an engagement in a given direction against a single halted enemy, it would be enough to march on a front of 20 or 25 miles, and with as little depth as possible.

When there is but one direction, *not dangerous, but still not without its anxieties*, and the army marches in the same direction in which it may have to fight, it is disposed in line. This is equally so for the assembly of the army at the outset of all the campaigns: in 1805, between Strasburg and Würzburg; in 1806, between Aschaffenburg and Bayreuth; in 1812, between Koenigsberg and Warsaw.

The army, when on the march, is not always directed towards the enemy; Napoleon frequently slips between the enemy and one of the limits of the theatre of operations. In this case the front of the army is not perpendicular to the direction of march; it is placed between this and the direction in which the enemy may be found. Such was the case in 1806, when

Napoleon moved against the communications of the Prussians.

(3) While reserving to himself the power of acting according to the different situations that may present themselves, Napoleon arranges his marches in such a way as to conceal their true objective. He conceals it so well that to-day all military writers who have neglected to read the correspondence of 1806 still remain convinced that the Grand Army expected to find the enemy at Leipzig. What contributed to keep the enemy in error and uncertainty was, as Duhesme so well observes, this way of *irregularising* movements. No simple geometrical forms—circles, squares, lozenges, hexagons—but an apparent disorder, which only resolved itself on the eve of battle.

(4) To obtain these different results the army must be in condition to manœuvre. On battlefields Napoleon ensured for himself the greatest liberty of action by holding his troops closely concentrated. In the course of his operations he proceeded in quite the opposite way. In battle the divisions march massed across the fields, and they must be kept well in hand ready to start at the first signal.

In the course of operations, on the other hand, movements are only made on the roads. The various hypothesis considered demand that the army should be able to march or to fight in several directions; the columns must be kept separated: usually they are halted at cross-roads (see the orders to Soult in 1806), in order to move readily in every direction.

The positions for each day are arranged in such a way as to admit of movement or concentration according to the various hypotheses and without

revealing by the actual shape of the grouping the principal aim of the operations.

§ 6. EXPLORATION

Napoleonic war, since it was profoundly different from war that had been made previously, demands a new mechanism, and this principally for exploration and protection. Napoleon creates this and uses it in such a way that no one since has been able even to imitate him.

If we leave the outposts on one side, by means of which a body of troops covered itself at short distance, and if we confine ourselves to that which concerns armies as a whole, *the object of protection is to conceal the plans of the general and the operations of the army ; the object of exploration is to discover the plans and the operations of the enemy.* We do not engage the enemy's army unexpectedly, and we do not inform ourselves of his strength by fighting. Primary information is sought and tabulated in peace time; the data furnished by official documents and newspapers, those again which are procured by espionage, are the foundation of exact calculations by means of which we endeavour to anticipate the distribution of the enemy's forces at the opening of the campaign that is to be.

This part of the service was admirably organised by the old régime, under which all military, administrative, and diplomatic authorities collaborated in the search for information. Napoleon reorganised it on the same basis; all his ambassadors and diplomatic agents contributed information. Through them he knew

before the opening of hostilities what the distribution of the enemy's forces was.

Once operations are begun, it is only by espionage and by good fortune, if one may say so, that we get to know the principal movements and sometimes the intentions of the enemy. Newspapers are one of the most valuable sources of intelligence, and Napoleon attached importance to getting them all; the secretaries of the Cabinet analysed them. Agents were established permanently in the large towns of neutral countries, close to the frontiers, and even in the enemy's country. Emissaries traversed the whole of the regions in which the enemy's troops were moving.

Such are the sources that yield the most important and the most numerous items of information. But they are intermittent. For some time they furnish very valuable news, and then in a critical moment suddenly fail: they are not to be depended upon. We must have recourse to troops to secure intelligence which may be less important than that procured by espionage, but which will always be available.

So long as Napoleon was at a great distance from the enemy he marched in the direction he had provisionally chosen, and was content with a general knowledge of the zone in which the enemy's troops were. As he drew nearer he needed more precise intelligence; spies continued to furnish it as far as possible, but the cavalry began their work of exploration.

It is commonly believed that the sole object of exploration is to obtain contact with the various parts of the enemy's army and to report on them, but the study of the Napoleonic wars makes one think

that this conception is singularly narrow. Napoleon entered upon the operations with an absolutely premeditated plan of campaign, admitting of variations which in their turn had been carefully studied. Each variation corresponded to one of the hypotheses which the Emperor had made about the enemy. The object of exploration was to eliminate the incorrect hypotheses. It was directed at a given moment in a determined direction, in order to elucidate certain well-defined points, knowledge of which was essential in order to confirm or eliminate such or such an hypothesis.

The manner in which he provides himself with information stamps the value of a general fairly well. Napoleon, with carefully worked-out plans, was always calculating the measures to be adopted according to coming situations ; he did not wait for information to come to him as the chances of reconnaissance might ordain, but it was he who directed the exploration, calling for light on some essential points of which he alone had seized the real importance.

A mediocre general, if he constructs his plan of campaign as Mack did, with no thought of the enemy, or if he remains inert like Bazaine, gets on without intelligence. Another general, on the other hand, never can get enough ; he waits to know the position of every one of the enemy's battalions before making his decision ; he submits to the initiative of his adversary.

We have seen how Napoleon, by the initial direction given to the movements of his army, reduces to a minimum the uncertainty and the number of hypotheses. Choice among these only became necessary in the

neighbourhood of the enemy—at most, two or three marches away. The Emperor did not try to get detailed intelligence as to the positions of the enemy; even if the information were exact and complete to-day, it would be less so by evening, and would not be so at all to-morrow.

In view of the operation orders for the following day, it is not so much the present position as the intentions of the enemy that one must know, and one can only arrive at them by interpreting all clues. Napoleon considered the material signs by which the plans of his adversaries might, according to circumstances, be disclosed, and selected a critical point, such that, according to what was discovered there, certainty would be achieved as to the line of action the enemy was adopting. Exploration was directed on this point.

In October 1806 early intelligence reported the mass of the Prussian forces between Weimar, Gotha, and Göttingen; Napoleon, who was six or eight days' march from Weimar, did not ask for more. At such a distance the details were of no interest. The Grand Army took the direction of Berlin; the real work of exploration was not yet begun. The Emperor was kept informed by letters seized in the post office, by travellers, by agents, etc. The cavalry threw out some patrols to the immediate front of the columns.

Little by little the reports of the secret agents became definite; the Prussian army was closing in about Erfurt and Weimar, between Jena and Gotha. Napoleon still marched towards Berlin, leaving the enemy on the left. On the 12th, Lannes was in sight of the Prussian army; the slightest movements of the Prussian columns became of importance; their

mere angular direction might be highly significant. The light cavalry of the army corps provided only information which took longer to reach the Emperor than the enemy required to move 12 miles. Whatever points of interest these reports might offer, they did not suffice to determine a decision one day in advance. Napoleon wanted something else. "*I am enveloping the enemy completely,*" he said, "*but I must have information as to what he means to do.*" And while for ten days he knew the enemy to be on his left at Weimar, he sent his exploration cavalry out ahead and to the right on Leipzig. "It is not the sort of exploration you usually practise," he explained to Murat; "do as you saw me do at Gera."

The whole of the cavalry corps then was sent into a region in which it is known that the enemy was not, but which was traversed by his principal lines of communication. Leipzig besides was a very important town, to which letters and news must come in abundance. Murat went out to intercept convoys and couriers on the roads; at Leipzig he emptied the letter-boxes and questioned travellers. On receiving his intelligence Napoleon exclaimed: "At last the veil is torn; the enemy is retiring on Magdeburg!" He did not say, "The enemy is at Weimar," because he had known that for some time, and *the veil which had been torn concealed, not the position, but the intentions of the enemy.*

This is an example of Napoleonic exploration. That day it was negative, that is to say, carried out in a zone where there was no enemy; in other cases it sought out the enemy himself, it was positive. Murat had an entire corps of cavalry, divisions of hussars, dragoons,

cuirassiers, and artillery, because the weakest hostile battalion encountered by chance at Leipzig would have checked exploration by a regiment or by a brigade.

Let us note above all that the task of exploration was not permanent. It was ordered at a definite moment and lasted two days.

In other circumstances exploration may be positive, prolonged, permanent ; it can be carried out by a small body of troops. Napoleon's campaigns offer us examples of every kind of special case ; but never will he have mere "cavalry scattered like dust." For great objects he employs great means.

§ 7. PROTECTION

Protection has not for its sole object to cover troops against all surprises ; it veils the projects of the general himself. This result cannot be obtained save by surrounding with a screen or curtain the whole zone in which the enemy may surprise couriers and columns in movement.

According to circumstances, it is either infantry or cavalry or both together that serve to mask the movements of the army. There was very rarely any question of such a service in earlier war, when armies moved all in one mass. We may, for instance, consider Frederick's advanced guard at Leuthen as assuring the secrecy of his manœuvre, but protection was organised by Napoleon on quite a different scale in order to mask the interior movements of his army.

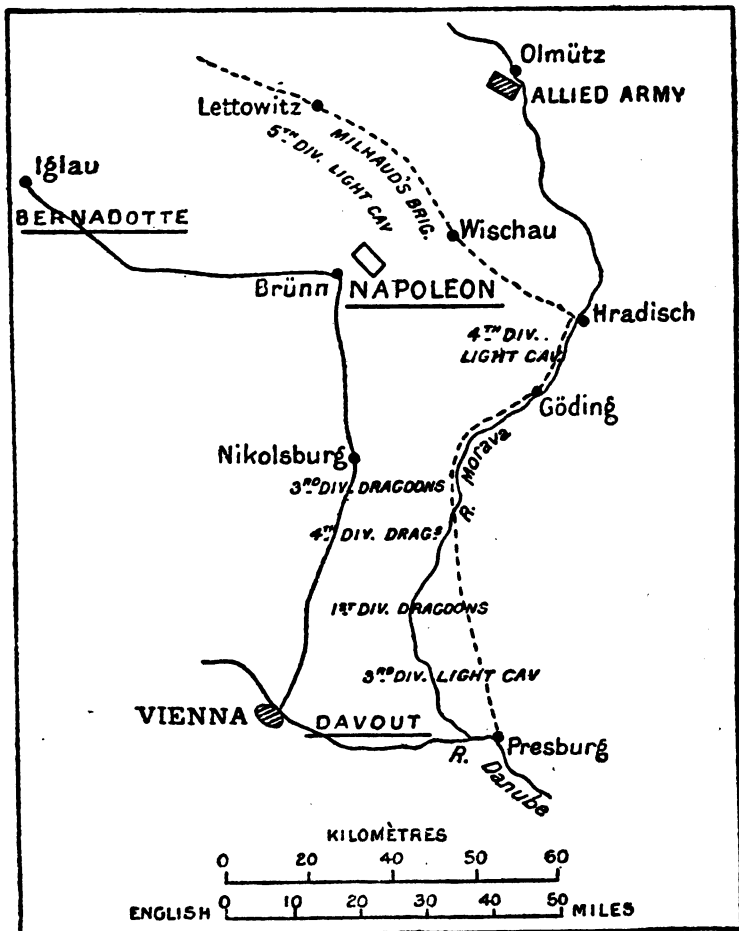
Just as with exploration, protection is not organised in a permanent manner. There are movements which we do not try to conceal. Thus the marches which preceded the battle of Jena or that of Eckmühl were

covered by no curtain. It was their rapidity alone which made them secret. Usually Napoleon's decisive manœuvres could be accomplished under cover. In order to mask them he made use of natural obstacles, mountains, watercourses, forests, swamps, of which he held the defiles and crossings. In Napoleonic war, which was all movement and all offensive, that was the proper rôle of obstacles ; they were not used as lines of defence, but as masks, auxiliaries to movement and to the offensive.

In 1805 the assembly of the army was in part concealed by the Rhine and the Black Forest ; in 1806 by the Thuringian Forest. In 1812 the manœuvre about Smolensk was masked by the Dnieper ; in 1800 the concentration on Schaffhausen suggested to Moreau was to have been made under shelter of the Rhine. In every one of these cases the line that covered the movements of the army was held by more or less strong posts.

There is a particularly interesting example ; it is provided by the dispositions adopted before Austerlitz. Napoleon wished to encourage the Allies to take the offensive in the direction of Brünn by making them believe that he had barely 45,000 men at his disposal. His cavalry covered his front, but stretched well beyond it, to the right as far as the Danube, to the left up to the mountains of Bohemia, on a front of 125 miles. This screen of cavalry, supported by infantry posts, masked the roads by which Napoleon concentrated Davout's and Bernadotte's corps at the last moment to fight the battle of Austerlitz.

The protective cavalry extends its action beyond the front of the armies ; it is the commander-in-chief alone who can fix the extent and situation of the screen



NAPOLEON'S CAVALRY SCREEN AT THE OPENING OF THE AUSTERLITZ CAMPAIGN

which is to be drawn. He uses for it at the same time both the independent cavalry ¹ and that of the army corps.

All this service of exploration and of security is "irregularised," like the marches of the columns. We might seek vainly not only for sealed patterns and uniform methods, but any fixed and regular structure; often the same troops are employed at one and the same time for exploration and for protection. They report the presence of the enemy, in order both to keep the higher command informed and to put the troops on their guard.

All the system of protection of which we have just been speaking has for its aim only to stop hostile reconnaissance. There is no question of repulsing any serious attack of the enemy's troops. In this respect the army protects itself. There is neither advanced guard nor flank guard; the different first-line army corps watch the directions by which the enemy can come on them. Napoleon will have no partial engagement and above all he will have no partial check. He never made a manœuvre depend on the resisting capacity of a single body of troops; that is too uncertain a factor.

§ 8. THE OFFENSIVE AGAINST A SINGLE MASS OF THE ENEMY

We have studied all the factors of Napoleonic war. Let us try to grasp an operation as a whole.

If the enemy forms but one single mass, Napoleon

¹ "Independent cavalry"—the cavalry brigades and divisions not attached to any army corps.—*Editor's note.*

combines his movements with a view to closing with him under the most favourable conditions for battle.

As the study of his battles has shown us, he means to attack his adversary in front and in flank at the same time. In the first place he will succeed in doing this by distributing the large units of his army over an extent of several miles, so as to make them converge on the enemy.

But this is not all. In the operations as a whole, as in the battle, he attaches great importance to the advantages which a flank attack or, better still, an attack on the rear of the enemy's army ensures. Every time he sees the possibility of doing so he will try to get at the enemy's communications, so long as he can do so without compromising his own, or so long as, confident in his strength, he does not fear to expose his own.

There was only one occasion on which he could foresee with some certainty that he could reach the enemy's communications: it was in 1800 when he moved the army of Dijon to Milan by the Great Saint Bernard while Mélas operated on Genoa and Nice. In his other campaigns he acted in a way to obtain this decisive result if the enemy committed some mistake. He ardently longed that they should, but he dared not hope for it, much less count on it.

In 1805, for example, the movement of the Grand Army was directed in such a way as to bring it on the rear of the Austrian army, if only the latter delayed in escaping; and yet, having arrived at Donauwörth and Augsburg, Napoleon could convince himself that Mack was not retreating by the Tyrol.

There is here an essential point to be noted. Except

in the campaign of Marengo, Napoleon never assumed with certainty that he could reach the line of his adversary's retreat, but he always operated in such a way as to seize it if the enemy gave him an opening. Never of deliberate purpose did he renounce this enormous advantage by making a mere frontal attack when he could do otherwise. Even if he had had no actual hope of succeeding in this point, still he would have operated in the same way. His object was not only to turn to good account all favourable chances for cutting off the enemy's retreat, but by merely menacing it he obtained an appreciable result. As in the battle, Napoleon counted on this menace to shake the morale of the enemy, to make him undertake movements in the course of which he would become more vulnerable, and then to pounce on him in the very act. When Napoleon succeeds in getting at the enemy's communications, he pushes on rapidly. Noting behind his adversary some natural barrier, he seizes at once its principal passages, after which, his army being already disposed according to his plans, he moves against the enemy.¹

On November 14, 1796, the Austrians had risked themselves in the trap between the Adige and the mountains. Bonaparte held the end of it at Verona. He knew that behind the enemy was a little stream, the Alpone, which was difficult to get over and only traversed by one road at Villanova. Leaving Verona during the night he hurried to Villanova; by bad luck a Croatian battalion which checked him at the bridge of Arcola caused the manœuvre to fail.

¹ See the theory of these operations in "Guerre napoléonienne: Théorie et Technique," by Colonel Camon.

He was more fortunate in the following campaigns : in 1800 he established himself on the communications of Mélas at the Stradella and on the Ticino ; in 1805, before attacking Mack, he first seized the whole course of the Lech ; in 1806, before assailing the Prussians at Jena, he held the Saal at Jena and at Naumburg. In 1809 the Austrian corps oscillated in the confined space between the Danube, the Isar, and the Abens, which was some 44 miles each way. Napoleon did not hurl himself on them on the strength of his first information, but first seized the principal exit at Landshut ; then he was master of the situation, and struck securely round about Eckmühl.

One thing is remarkable. While great turning movements succeed but rarely in battle, great manœuvres directed against the rear of an army often succeed. Bassano, Marengo, Ulm, Jena, Landshut, were completely successful. If at Villanova (1796) and Guttstad (1807) the enemy escaped from the manœuvre, he at least beat a sufficiently hasty retreat to facilitate the victories of Arcola and Eylau.

To get at his adversary's line of retreat Napoleon naturally avoids becoming prematurely engaged with him ; he makes his army file along one side of the theatre of operations, avoiding anything like an encounter.

In order to prepare this operation the army is *assembled* on a very wide front, facing the enemy, and as far as possible behind a natural screen of river, mountain, or forest. Then suddenly it closes on one wing, and by a rapid march it makes a bound forward. The enemy finds himself confronted with an accomplished fact and an irremediable situation before the

movement has been reported to him. While he is still considering what remains to be done, a march or two brings the French on to his communications.

Thus, in 1805, the army which commenced to assemble between Strasburg and Wurzburg closed on its left while moving rapidly on Donauwörth. While Mack was learning of the passage of the Danube, Napoleon from Landsberg possessed himself of Augsburg.

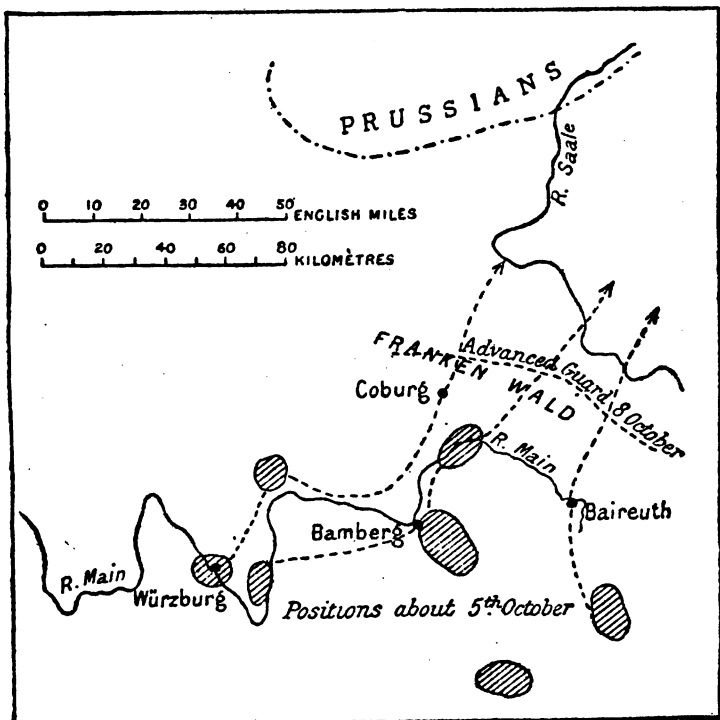
In 1806 the army assembled on the Main from Wurzburg to Amberg; as soon as it was ready it closed on its right, avoiding contact with the Prussians. In three long marches it crossed the forest that concealed it, and attacked Gera. While Brunswick wondered what was happening to him, Napoleon occupied Jena and Naumburg.¹

To assemble the army on a wide front, to cover it by making use of natural obstacles, under cover of these to close the army suddenly and throw it forward, to hold it constantly ready for all movements, all evolutions, this is what Napoleon alone knew how to do. Whatever the difficulties might be they were well compensated by the advantages. Not only does this offensive on the extremity of the theatre of operations prepare the seizure of the enemy's communications, but it also lessens the uncertainty in which a general has to live and take his decisions in war. By keeping at one end of the theatre of operations he reduces the number of directions in which he has to look for the enemy, and the number of combinations he has to foresee. By seizing a river barrier on one

¹ The Frankenwald is generally known in English histories of the campaign as the Thuringian Forest.—*Editor's Note.*

of the communications of the enemy, he reduces the number of operations the enemy can attempt.

In 1806, for instance, Napoleon, marching to the extreme right along the frontier of Bohemia, knows



that the enemy is on his left. If he had marched in the direction of Weimar, on pretence of going straight to his goal, he would have been in the greatest uncertainty, obliged to obtain information to guard himself and prepare for battle in all directions.

Clausewitz is right in saying that in war a general

moves in a cloud of uncertainty ; he would have done still better to show us how with two strokes of his wand genius cuts and disperses the cloud. The offensive manœuvre on one extremity of the theatre of operations presents one other immense advantage ; it is that which is most favourable to liberty of action, since it keeps us from contact with the enemy and his influence.

Liberty of action can never be complete in war ; it is limited by the presence of the enemy, and the only movements that we can pretend to carry out freely are those we can make without encountering him. Assuring liberty of action above all consists in only planning operations which cannot be countered by the enemy ; which can be carried through to the end without risk of interruption by an encounter. By taking the necessary precautions one can always surmount material obstacles. The Great Saint Bernard and the Niemen could be crossed without miscalculation, but a handful of men could stop an army at the Bridge of Arcola, and its artillery at the fort of Bard.

Napoleon's first care, then, was to avoid engagement until the decisive day. He frequently repeats the recommendation that concentration must be effected beyond the enemy's reach. As far as possible he avoids partial encounters with the enemy. He desires that contact shall only take place when the whole army is ready to give battle.

Thus, in 1806 Lannes receives the formal order, several times repeated, not to engage unless he comes across an isolated division of the enemy ; if he surmises the presence of a whole Prussian Army Corps, he is to avoid contact and report. He is to halt if he can

do so without exposing himself to fight ; he is to fall back if in no other way he can avoid engagement. He is only to advance again in order to attack with the whole army concentrated. On the approach of the Russians on December 1, 1805, Napoleon holds himself ready to beat a retreat if he has not the time to concentrate the corps of Davout and of Bernadotte before contact is taken.

Thus, concentration is not effected round a corps already engaged with the enemy, but round a corps which is the more solid because it is intact, free in its movement, and in condition to obey all orders.

It once happened that Napoleon, in consequence of some mistake, got entangled with the enemy. It was on February 3, 1807, at Jonkowo. It was just that day that his adversary escaped from his clutches.

To Napoleon the best way of safeguarding his liberty of action was not to allow one of his big units to get engaged with and held by the enemy. He also put himself in a position to profit by this freedom, by not fettering himself with bad march dispositions.

We lay stress on this part of the Napoleonic method because recently a way of ensuring liberty of action has been devised which consists of allowing divisions to be caught and beaten by the enemy on the pretence of entangling him and fixing him. It is the strategy of the fisherman who, with one finger, catches a lobster by the claw.

This false manœuvre has been evolved by applying to offensive operations methods suitable to defensive operations, without even leaving them all their value. Let us never forget that in the offensive it is force and rapidity, together with the decision of the commander,

which guarantee the protection of the army better than any mere measure of precaution can do. To multiply supporting points, flank-guards, and detachments of all sorts far from the army is to misunderstand the offensive. These weaken it at the moment when it has need of all its strength to obtain success at the decisive point. They betray the timidity of a leader who ought to be bold, one who takes the offensive in deference to the opinion of others, and does not feel himself impelled to it.

In 1806 Napoleon assembled his army in full security behind the Thuringian Forest. On the day that he decided to cross it there were no covering force, no flank-guards, only speed. In one bound the army pushes on to the Saal. It has initiative, it has strength, it is beforehand with the enemy's attacks and disdains to trouble about them. By the mere fact that it attacks energetically and resolutely, it disconcerts smaller combinations, rends the spiders'-webs, and thinks nothing of dragging the débris along on its flanks.

§ 9. DEFENSIVE CENTRAL POSITION

One need hardly say that we do not find a single example of the pure defensive in Napoleon's campaigns. In those operations in which the offensive follows the defensive, or a period of expectancy, it is produced immediately and the defensive action is but of short duration. It is especially in 1796-7 that we find examples of it. There we see the defensive-offensive method of Bonaparte in the full light of day.

The divisions of his army are distributed on a wide front, and each occupies a very solid position which it

could hold for at least a day against superior forces. They are mountain positions like Voltri, Montelegino, the Corona, Rivoli; or even fortresses like Verona and Legnago on the Adige.

Rampon could hold on indefinitely at Montelegino; Cervoni holds on till nightfall at Voltri, and retires without having suffered severely; the same with Joubert on the Corona at Rivoli.

It is by placing divisions in such strong positions that we can count on their capacity for resistance to procure the time necessary for concentration. But even so we are often disappointed. It is not without serious material and moral wastage that Masséna is driven out of Rivoli on July 30, and Vaubois from Lavis on November 16, 1796.

In 1807 the Grand Army, in cantonments on the right bank of the Vistula, is unable to establish its army corps in such strong positions as in 1796. So, in the event of attack, a corps threatened by the bulk of the enemy's forces is to retire while the others are concentrating. In this case, as in a purely offensive operation, concentration is effected in such a way as to cut the enemy's line of retreat.

While Bernadotte is retiring before Bennisen with the order to fall back, if necessary, as far as the Vistula, the rest of the army hurries on to the Alle to seize its passages.

There is in fact very little difference between purely offensive operations, if they are considered from the day the enemy appears in sight, and the operations of the offensive-defensive.

When Napoleon has forces very inferior to those of the enemy, we know how, in 1814, for instance, he

understands the defensive. It consists of a series of attacks, of furious blows in all directions. When others have to conduct a defensive war, he advises them to use the ground so as to combine defence with attack. Sometimes it will be by taking up a central position in the plain in order to attack the enemy in turn as he debouches from the mountains. Most often it will be upon a river line. A grave error will be committed in simply trying to prevent the enemy's passage.

“ Nothing is more dangerous than to try seriously to defend a river by holding the opposite bank ; for once the enemy has surprised the passage—and he always does surprise it—he will find the army in very extended defensive order, and he will prevent it rallying.

“ A river, or any sort of a line, can only be defended by holding the offensive points, for when one has done nothing but defend oneself, one has run risks to obtain nothing ; but when one can combine one's defence with an offensive movement, one causes the enemy to run more risks than the corps which is attacked. . . .

“ There is nothing else to be done than to so dispose of one's troops as to be able to assemble them in mass and fall on the enemy before he has completed his passage.”

Napoleon's defensive, like his offensive—even more, perhaps—is made up of nothing but movement.

All Napoleon's contemporaries understood, as he did, the advantage there was in turning or outflanking an enemy ; but the generals who opposed him did not know, as he did, how to combine envelopment with the assembly of forces. Usually they divided

their troops into two or three completely separate armies, and tried to bring about a converging and simultaneous attack on Napoleon's army. It is then that Napoleon took up a *central position* between his adversaries, around which he faced turn and turn about one or other of the enemy's armies.

Military writers, following the example of Jomini, after strangely naming this method the *manœuvre on interior lines*, have represented it as Napoleon's favourite operation. During long years they have disputed whether this preference had any motive, and if there was reason for practising this so-called *manœuvre on interior lines* rather than the turning or enveloping manœuvre.

It is easy to prove that the question does not arise. There are cases in which manœuvre on a central position is necessary, and the rest of the time, with the best will in the world, it is impossible to have recourse to it.

When Napoleon finds himself with inferior forces in presence of two separate armies of the enemy, like the English and Prussians in 1815, it is natural that he should throw himself between them in order to prevent their joining, and that he should try to beat them in succession. He could not try to envelop them both at once in a vast outflanking movement.

Let us suppose him, on the other hand, in presence of a single army; how could he take up a central position?

Napoleon, then, had recourse to this latter solution every time that his enemies invited him to it by forming two separate armies. He could never have had the notion of making it into a fixed rule for all cases.

What is true is that his enemies, convinced of the advantages offered by turning movements but neglecting the assembly of forces, afforded him with astonishing frequency the opportunity of manœuvring on a central position.

As it is usually pictured, the manœuvre on a central position consists in this—that Napoleon, being placed between two armies, holds one with very inferior forces, while he directs superior force on the other and beats it; then, leaving a mere rear-guard in front of the second, he leads the mass of his forces against the first.

In practice this manœuvre shows itself in various forms, according to circumstances, and Napoleon was probably wrong in his last campaign to adhere to methods which had succeeded nineteen years earlier.

In the spring of 1796 he had the game, relatively speaking, in his own hands. One after another his adversaries at first opposed to him only detached divisions, a kind of advanced guards. He was able to beat *some* Austrians at Dego, and *some* Piedmontese at Millesimo on the same day; then, as the bulk of the Austrians were still very far away, he was able to neglect them for awhile in order to devote himself to the Piedmontese.

In his splendid manœuvre of Castiglione he had to play with his general reserve between two hostile armies debouching one to the west, the other to the south of the lake of Garda. But one of them, after a first check, had renounced the contest at once, and Bonaparte was able to have it pursued by a weak division and to throw the rest of the army on Wurmser at Castiglione. During the days of Arcola a single

and ill-commanded division sufficed to hold the hostile corps which was coming down the Adige from Trente to Rivoli.

In none of these three operations did Bonaparte thoroughly pursue the adversary he had first beaten. Thus a conception of manœuvre between two enemies may have established itself in his mind, involving a series of blows to right and left, while never pushing home any but the last attack. In 1815, victorious over Blücher at Ligny, he did not pursue him and destroy him, as he might have done without risk, still having a line of operations open by Mezières on Thionville; from Ligny he marched to Waterloo, leaving only Grouchy in front of the Prussians.

The case of 1813 is more complex. Napoleon had not, as in 1796, two of the enemy's armies in front of him, but three; and one may ask oneself if in war, as in mechanics, the problem of three bodies is not insoluble. Then again it was a case of great masses in the field; 450,000 men against 510,000, and, above all, an almost unlimited space in which they could move about, for the Allies could fall back to the heart of Russia and Hungary.

The problem was far more difficult to solve than that of 1796. But it was not beyond the strength of Napoleon the soldier; it was Napoleon the statesman who hindered the solution.

This solution was clearly perceived and indicated by the Emperor: to reduce the enemy's masses to two by advancing boldly on the one that could be turned with least difficulty, and of which the line of retreat was most limited. By throwing Bernadotte into the Baltic, the blockade of the fortresses of the Oder and

Vistula would be raised, and he could return with sufficient forces to fight Blücher and Schwarzenberg combined.

But on this theatre of operations there stood Dresden, the capital of an allied sovereign; and Napoleon would not abandon Dresden. He made it his *dépôt*, his centre of operations, his central position was about Dresden, and when he removed it to Leipzig, Napoleon still left a corps behind at Dresden, which was lost as far as the battle went. Policy intervened before the decisive battle, and lost all. The movements to and fro about Görlitz, the successes without results, like that of Dresden, exhausted the army without providing victory. Against the adversaries of 1813, who knew how to avoid or how to engage in battle according to circumstances, so delicate a manœuvre as that of 1796 was unsuitable; it was necessary definitely to crush one of the enemy's armies before passing on to the others. The manœuvre on a central position was still possible, but with other methods. Will it always be successful? It very nearly failed in 1796, and it needed all Bonaparte's genius to finish off Wurmser. In 1813 the Allies hit off a line of conduct that made the manœuvre about a central position more than difficult; whichever of their armies Napoleon selected for attack was to slip away, while everywhere else the forward march was to be carried on concentrically. It was in this way that Blücher and Schwarzenberg ended by surrounding Napoleon at Leipzig without his having been able to fight the partial battles he was continually seeking. We have seen that in battle the advantages of envelopment continually increased at the expense of the central

position. It is the same with operations as a whole, and for the same reasons.

Let us imagine the campaign of 1813 begun again, but under modern conditions. Napoleon's movements to and fro would not have been helped by them, while telegraphs and motor cars would have enabled the Allies to regulate and harmonise their operations.

CHAPTER IV

WAR IN THE NINETEENTH CENTURY

§ I. NAPOLEON AND GERMAN DOCTRINE

WHAT we know to-day about the principles and procedure of Napoleonic war we owe to the publication of innumerable documents which have been brought to light during the last fifty years ; firstly the "Correspondance de Napoléon," then the numerous works embodying original documents, of which Colonel Foucart gave an example in his "1806." Eighty years ago no one was in a position to penetrate so deeply into the knowledge of the Emperor's projects ; men had but a general idea of his campaigns. In a few excellent pages Jomini showed well what a manœuvre in the Napoleonic sense might be, but he buried this precious passage under a heap of strange definitions and trifling dissertations.

What were then principally seen in Napoleonic war were its essential characteristics—that is to say, its offensive spirit, its vigour, and its promptitude.

That which Condé had been unable to do in 1650 and Frederick in 1750, Napoleon was able to do in 1806—that is, to prepare, to obtain, and to exploit to the utmost the decisive battle. Thanks to the resources of modern tactics he was able to give free rein to his

genius, and it was the rapidity and fury of his offensive which men noticed.

If some sort of statistics were to be drawn up of his campaigns and his battles, it would be proved that the greatest results had been attained by energetic attacks and pursuits. Extremely skilful manœuvres like those of Lützen and Bautzen did not gain the greatest triumphs. Officers who had been through the wars of 1809 and 1812 in the army of the Allies maintained that the success of Eckmühl would have been greater if the détour by Landshut had been omitted; that the ingenious manœuvre of Smolensk had thrown away the opportunity of meeting and beating the Russians.¹

Finally the events of 1813 and the loss of the communications at Leipzig had struck a decisive blow at the audacious and rather artificial doctrine formulated so clearly by the Emperor, according to which the line of operations was alone to be considered, the line of retreat being of no importance. In 1812-13 and in 1813-14 men had seen long-drawn-out retreats, proving the necessity for an army of having its communications with the mother country secure throughout their length. And also in 1812, as in 1813, the great number of the troops and the extent of ground on which they had to deploy had obliged Napoleon himself to abandon the principle of unity of the line of operations which he made the foundation of his doctrine.

And so there emerges a conception of war which sees almost solely its moral aspect, and makes of it an act of vigour and of energy; this is the conception

¹ Clausewitz, "Campagne de 1812."

of Clausewitz.¹ Compared with the masterpieces of Napoleon it seems very incomplete, but from them it has taken the better part, and there is no conception more capable of inspiring a nation of warriors. We have proof of this.

Clausewitz had the incomparable merit of driving formalism out of military science. In spite of the errors of detail which his books contain, whosoever is brought up in his school becomes incapable of seeking the secret of victory in formalism or in empty phrases—he thinks only of forces, material and moral.

In war, more than in anything else, great thoughts come from the heart, and there is no better inspiration than hate. It was hate that made Blücher triumph over Napoleon. Analyse the best manoeuvres, the most decisive operations, and if they are not the work of an exceptional man, of Frederick or of Napoleon, you will find them inspired by passions rather than by calculation. What would the war of 1870 have been without the hate the Germans bore us ?

Looking at war from this point of view, Clausewitz attaches but little importance to the form of the operations. It is true that he wrote one of his best chapters on the secrecy necessary for manoeuvres, but he despises the geometrical element in war—that is to say, the mere form of the operations. He wants men to march straight on the enemy's principal army, so as to have the decisive battle as soon as possible. According to him, the object of turning movements is to increase the results of victory, not to procure it. To win, it is better to march straight on the enemy

¹ Clausewitz derived his doctrine from Scharnhorst, and shares it with his contemporaries, Gneisenau, Müffling, etc.

with all forces assembled than to divide the army up beforehand, with a view to manœuvring. The essential thing is to pursue vigorously as soon as one has gained the victory.

Principles which appear most firmly established find no favour with him ; he cares little for guarding his line of retreat *if he is the stronger* ; in this he follows, if not the written doctrine, at any rate the practice, of the victor of Marengo, of Austerlitz, of Jena. He makes fun of bases, and interior lines of operation, and other things that Bülow and Jomini introduced into the strategical vocabulary.

He continually calls to mind the dangers, the uncertainty, the incidents, or the *friction* amidst which decisions have to be taken in war. "War is the domain of danger," "war is the domain of uncertainty," he repeats, and at first it does not seem as if we should become more skilful in leading troops through reading such aphorisms, but if we allow ourselves to be imbued with them we become impervious to the fads of system-mongers ; we avoid formal rules and depend on initiative ; we only accept simple principles and simple dispositions, such as may survive amidst the friction, the uncertainty, and the danger ; such as seek for success in the employment of force rather than in a combination of angles and lines.

The army which beat us in 1870 was the creation of William, Prince, King, and Emperor. For half a century he had devoted himself to forming it, to imposing on it the cult of the initiative and of energetic action. This primarily is why it won. Add to this a group of generals provided with a simple and

solid doctrine, and you will have the measure of what Clausewitz did for his country. In Moltke's operations of 1866 and 1870 we find the strategy which would naturally be produced by the preaching of Clausewitz.

In the work of this great military writer there is a whole section of which men do not always seem to grasp either the truth or the important bearing. It is that which treats of the defensive. We should be mistaken, of course, if we saw in Clausewitz any sort of preference for the defensive; he knows better than any one that the offensive alone procures positive results; no one saw better or understood better what the offensive at its highest point of energy can give; but he also saw that the defensive (to employ his own expression) is often necessary to arrive at victory.

It is rare that an army, even if it is very superior to its adversary, can act continually on the offensive, to do so it would have to be engaged with completely inert or incapable enemies; and again there is no manœuvre in which at any rate a part of the army does not avoid battle, either by remaining halted or even by retiring. We have seen that in a general way Napoleon forbade his marshals to compromise themselves with the enemy before the time of the general engagement. And the result always was that some were obliged provisionally to abandon offensive action. The orders to Lannes in 1806 definitely laid down that he should retire if the enemy advanced against him.

Napoleon had occasion to regret the few occasions when he did not act in the same way. In 1800 he did not prolong his halt at the Stradella, and engaged

under unfavourable conditions at Marengo. In 1813 he made Oudinot and Ney assume the offensive at the same time that he himself attacked in Saxony ; thus the failures of Gross Beeren and Dennewitz were the prelude to Leipzig. The conduct of the Allies is perhaps the most instructive and the most profitable example, both for its theory and for its practice. It did not demand superhuman genius, and for the rest, it was directly inspired by the principles that are of the very essence of war. Everything in war is resolved by force, by battle. On the day of battle no battalion, no battery must be missing, and all the troops must be as intact as possible. The different parts of the army should always make it their object to concentrate on one single battlefield, and up to then to avoid any partial encounter in which victory would not be certain. The three great armies of Bernadotte, Blücher, and Schwarzenberg were about to converge in the region of Dresden and Leipzig to fight a general battle there. Each of them was to attack vigorously, if it encountered one of the French marshals or a secondary army, but was to refuse battle every time that it saw Napoleon and the bulk of the French forces approaching.

Thus we have a combination of the offensive with its opposite in order to attain a general victory. And if we think it over, if we eliminate the prodigies of skill that Napoleon accomplished in his manœuvres, we find at the bottom of it all this pre-occupation of concentrating all his forces for a general battle, and of not compromising any division in partial fights of which the issue was uncertain. In this connection, the instructions given to Murat in 1805, to Lannes

between October 8 and 12, 1806, should be compared with the plan of the Allies.

Even in the most offensive manœuvre, there are nearly always operations which have the opposite complexion, because one is obliged to *preserve* the forces intact for battle. The defensive in the fight, the attitude of expectancy or retreat in the operations, are means of preservation, and it is easier to preserve than it is to acquire. If we doubted this, it would be enough to remember that a weaker body face to face with a stronger generally has recourse to non-offensive tactics. Clausewitz affirms most reasonably that if it is the offensive alone that can give positive results, the opposite allows one to make sure of negative results at a less cost, and that it is often necessary to have recourse to it.

It is by meditating on all the events of 1813, those very events by which Clausewitz himself must have been inspired, that we thoroughly understand the qualities attributed by him to the defensive: "The defensive which preserves is easier than the offensive which desires to acquire." "The defensive is the stronger form with a negative aim; the offensive is the less strong form with a positive aim."

Simplicity in conception, energy, ardour, passion, opportune employment of the offensive, this, and no more, is the doctrine of Clausewitz.

§ 2. MOLTKE'S MARCH STRATEGY

In 1813 the Allies had raised 700,000 men, of whom 510,000 composed the field army. Napoleon opposed them with 550,000 men, of whom 450,000 were in the

field army. In the month of August 1870 the Germans invaded France with 512,000 men against 240,000.

The effectives in use were no greater in 1870 than in 1813, and the operations might have been directed according to the same principles and methods as in the Napoleonic wars. However, this was not the case.

We will not speak of the operations undertaken by the French. Directed by generals who, in accordance with national prejudices, had had no other teacher than their own experience, and did not dream that to move 250,000 men dispositions have to be combined, such operations do not presuppose any directive ideas worthy of examination. Therefore we will stick to the German operations.

Under the influence of Clausewitz they diverged palpably from Napoleonic methods; and, moreover, the density of the network of roads favoured the adoption of a new system of marches. In 1805, when Napoleon went from the Rhine to the Danube, he found four roads on a front of 56 miles; in 1870 there was available, on the average, one independent route to every 5 miles of front. These circumstances, added to the ideas taught by Clausewitz, determined the methods of the Prussian grand tactics.

Clausewitz, who reminds men continually of the dangers, the uncertainty, the friction amidst which decisions are taken and operations are carried on, advises men to avoid everything that is complicated, trifling, or far-fetched. His disciples will deliberately avoid the wide Napoleonic manœuvres; they will seek neither to prepare turning movements from afar, nor to combine their marches skilfully so as to conceal their object or to be able to change their dispositions

according to circumstances. In studying the operations and projects of Moltke we have not to admire refinements such as are presented by the operations of 1800 or of 1806; everything is of the most extreme simplicity. The Prussian armies of 1866 and 1870 march straight on the enemy in the direction in which he is reported. Their march is merely organised with a view to a straightforward battle. "In every march," said Moltke, "two considerations must be taken into account: the reduction of the columns to a minimum of depth, and facility of deployment for the fight."

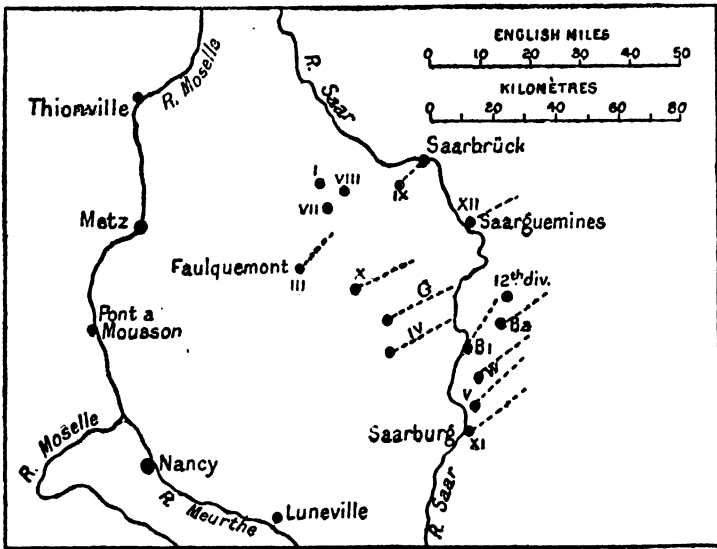
This facility demands that the columns should be multiplied as much as possible. "It is a mistake to think that one is concentrated when the whole army corps is marching on the same road. One loses more in placing the troops in depth than in disposing them on the line of the front, because two divisions marching parallel at an interval of 5 or 6 miles one from the other, support each other better and more easily than if they followed each other."

This is the only point of view in which Moltke places himself in order to organise the march of his armies; but in practice he often forgets the principle we have just quoted, and excessively diminishes the number of columns. It is thus that in a memoir of November 16, 1867, embodying one of his numerous plans of campaign against France, he declares that *the most rigid concentration is necessary* during the marches, and he gives but one road to every 100,000 men. So that deployment may be possible in the event of an encounter, the depth of each army corps has to be reduced to about 10 miles, which demands special formations very trying to the troops. Also, according

to Moltke, one must only make very short marches and bivouac constantly. This method involves many drawbacks.

In a memoir drawn up in the spring of 1870 Moltke wrote again à propos of the first marches that are to follow concentration :

“The operation will simply consist in this—that



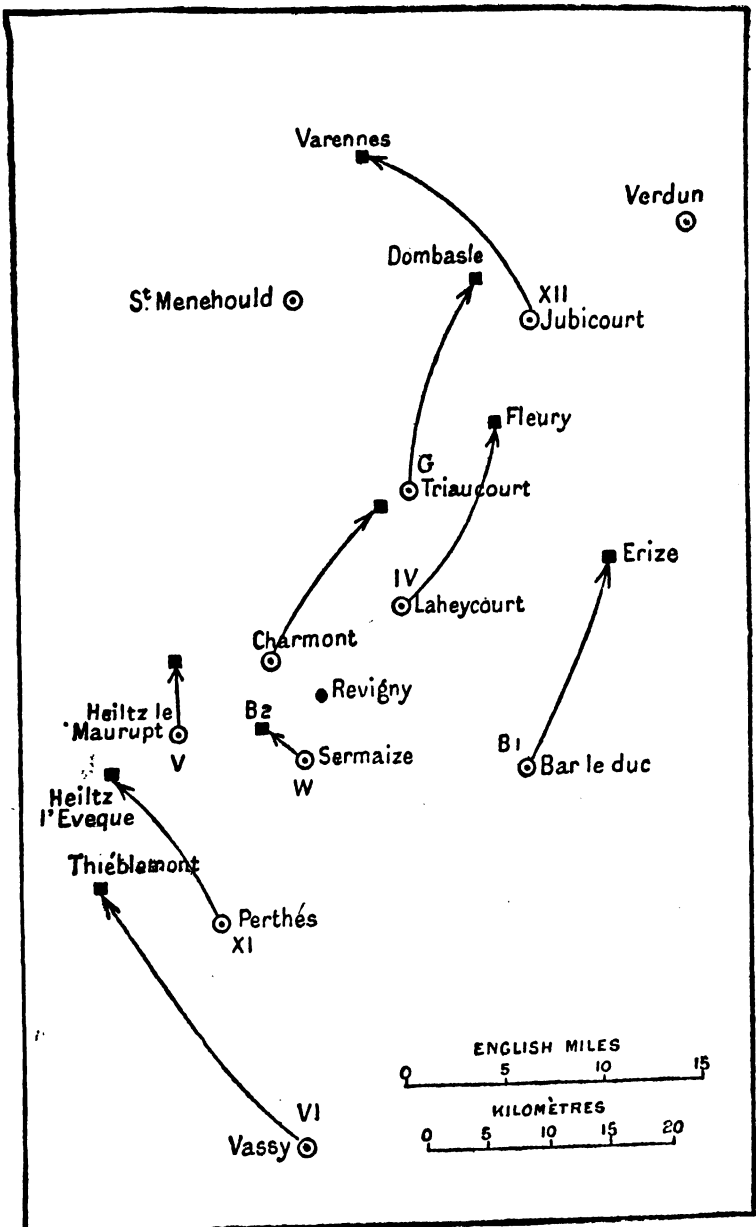
we shall make a few marches on French territory in as massed an order as possible until we meet the adversary's army to fight it.”

In these few lines Moltke's "grand tactics" are summed up. The various projects he drew up from 1859 on, always show groups of columns in which the intervals vary from 3 to 5 miles.

In 1870, during the march from the Sarre to the

Moselle, on August 10 or 11, for example, the front of the assembled 1st and 2nd Armies is 21 miles to eight army corps, of which six are in first line. It is a density of six men per yard of front, a fighting density ; the duration of the concentration is reduced to nothing, but deployment will take at least six hours. One may be surprised that Moltke, having advocated columns of divisions, here forms columns of army corps in order to over reduce the front. The density of these formations and the alignment of the heads of columns make evolutions difficult. On August 11, for example, Moltke has no information about the enemy, and his seven first-line corps are deployed on an arc of which the very shallow convexity is turned to the front. If the enemy is reported between Metz and Thionville, the three corps of the left aligned on Metz cannot come up in time ; if the enemy is reported towards Dieuze, the three corps of the right will find themselves piled up on one and the same road.

On August 25 the Army of the Meuse and the 3rd Army were marching on Rheims and Châlons. Like the above, they have six corps in first line and two in second line. The front is turned towards the west. On the information of MacMahon's movement towards Montmédy, a sudden change of direction has to be made in order to march to Sedan ; and nothing can be more difficult than this change of direction. Three corps find themselves crowded up one behind the other ; each corps hampered itself and the one following, which is quite close up. The four other corps remain far to the rear and will only rejoin at Stonne. All this is only disentangled by making excessive demands on the troops.



Let us carry ourselves back to the change of direction carried out on October 13, 1806, by the Grand Army in order to concentrate towards Jena, a movement so simple and so natural that, except for a word in an order to Sault, there is no need for the Emperor to mention the itineraries. Truly the grand tactics of Napoleon are superior to those of Moltke. The latter only consider the case of a battle in which the enemy has placed himself precisely on the line of march ; they contain no provision for the unforeseen.

It will be contended that Moltke did not manœuvre with army corps in one army, but did so with armies. In 1866, as in 1870, he divided his forces into three armies, but did he use them to manœuvre with ? In the examples we have just quoted there is no question of an isolated army ; it is a case of armies glued together which form these groups of parallel columns.

It is the 1st and 2nd Armies together that march on August 10, 11, and 12, from the Sarre to the Seille ; it is a group of three or four armies that we see in the projects of 1859 to 1870 directed in a narrow bundle of parallel columns on Metz or Nancy.

There is certainly one possible corrective to the rigidity of the dispositions taken by Moltke : it is exploration. Deployment under the best conditions being assured so long as the army marches in the direction of the enemy, it is, and it should be, sufficient that it be kept constantly informed by the cavalry.

In his instructions to the commanders of the larger formations Moltke defines the principles of exploration ; as often as possible they are to employ patrols of officers, composed of a small number of horsemen, and only quite exceptionally large units, such as

brigades or divisions. Their mission is to make known exactly the position of the enemy, and usually will only succeed in this by turning it.

This method of exploration differs essentially from that which Napoleon organised in 1805, in 1806, in 1812; its rôle is more strictly limited, its means less varied.

The principles laid down by Moltke are little observed in practice. He is not kept constantly informed, as he counted on being, and on August 11, 15, and 17 his ignorance about the enemy is almost complete.

The fault lies in himself, because he leaves the cavalry in the hands of army commanders, or even of army-corps commanders, without laying down for it any well-defined task. He expects information to come to him instead of having it sought at some given point. The exploration cavalry is, as we have seen, the instrument of the commander-in-chief; it is he who causes it to act; it only furnishes him what he asks of it. There is perhaps no part of the army that feels and expresses so clearly whether the general has ideas and a firm and definite will.

§ 3. MANŒUVRE IN THE PLANS AND OPERATIONS OF MOLTKE

It is difficult to form an opinion on Moltke's doctrine, so many are the contradictions between his acts and his writings, and even between one of his projects and another. Sometimes one sees him executing or projecting movements in dense and rigid order, as we have just indicated; sometimes he speaks of operations which presuppose bold and wide movements; but in

this case he always confines himself to very general indications. Moltke, like the Allies in 1813, often organised three armies, to which he apparently means to give convergent directions ; but in reality he departs widely from the examples of 1813.

The characteristic trait of the operations of October 1813, as far as the Allies are concerned, is the convergence of the three armies starting from Bohemia, Silesia, and Brandenburg on the central point of Leipzig, and their engagement in battle before they had been united. Moltke does not act in that way ; his armies only move separately when they are far from the enemy, and always join closely together before attacking.

It is rather curious that a contrary reputation has been made for him ; for many historians the difference between Napoleon and Moltke consists in this—that Napoleon completed his concentration before battle, and that Moltke fixed his point of concentration behind the enemy's front. This opinion seems to be the exact opposite of the truth.¹

Let us recall to mind Sérurier's manœuvre at Castiglione ; the movements projected for Soult on the Iller ; for Davout at St. Pölten and Jena ; those which Ney carried out at Eylau and at Bautzen ; the converging movements of Napoleon and Davout at Eckmühl. Let us compare them with the operations of Moltke in Bohemia. From the opening of the campaign the Prussian forces were separated into two masses, of which one was in Silesia and the other in Saxony—a solution the formalists criticise and

Unless Moltke always saw all his projects countered, as has been suggested with some probability.

which we should admire unreservedly. Like all fine operations, Moltke's offensive in 1866 is audacious in appearance and in reality without danger. If the Austrians had wished to bring superior forces against the Crown Prince, they ought to have been crushed in Bohemia by Frederick Charles. In the contrary case the Prussian armies would have concentrated at Gitschin. On June 30 they are still a long march away from each other, but, as we have seen in speaking of the battle, Moltke completes the concentration before passing on to the battle, and only attacks on July 3, with all his forces, not assembled (in the Napoleonic sense), but closely concentrated for the last three days.

There is no question here of declaring Moltke inferior or superior to Napoleon or to Blücher, but of characterising his proceedings with reference to those of the Napoleonic period. War has a practical object—victory; and the triumphs of Moltke amply demonstrate the value of his methods. It is all the more important to define them correctly and not to see in Moltke's tactics the triumph of great turning movements.

The distribution of the German forces into three armies for the campaign of 1870 presents a singular analogy with the dispositions of the Prussians before Sadowa. In one case, as in the other, the principal army is in the centre (Frederick Charles); a small army of two corps to the right accompanies it like a satellite, and does not seem destined for any important manœuvre; to the left, the army of the Crown Prince debouches almost at right angles to that of Frederick Charles, but is to join on to it closely before the battle.

In the commander's mind, we have said, wing

armies have not got to make great turning movements ; but they are none the less destined to carry out a manœuvre, for they are to outflank the enemy. What Moltke seeks, in conformity with the doctrine of Clausewitz, is tactical success ; and he calculates that he will obtain it with less risks by outflanking a wing of the enemy's army than by turning it. At Sadowa, Prince Frederick Charles's initiative, it seems, directs the effort to the opposite side to that on which Moltke wanted it ; on the Sarre it is the disobedience of Steinmetz that causes the projected manœuvre to fall through.

Without doubt Moltke is persuaded that since the last campaigns of Napoleon a movement of very wide scope is exposed too soon, that even for an outflanking movement one cannot hope for secrecy if the corps charged with its execution advances prematurely beyond the centre ; the frontal battle must be joined before the attack on the wings is unmasked. Thus the principal army (that of Frederick Charles), although it is to attack first, must wait, and avoid engagement so long as the Crown Prince is not yet within distance to come into action ; and the subordinate armies may not advance beyond it till that moment. This is the manœuvre that Moltke neglected to explain to Steinmetz, and Steinmetz, having less profound and less correct views than his master, wants to march on and attack first. Add to this that he encroaches beforehand over the zone reserved for the Army of the Centre, a thing which cannot be explained by any erroneous conception of the operation.

We must not fail to observe that this manœuvre of Moltke's projected for Sadowa and for the Sarre

excludes, like Napoleon's project, all encounters hazarded before the decisive battle. Of necessity there are partial actions like those of Froeschwiller; the secondary theatre of operations in Alsace must be thoroughly cleared, but the Crown Prince disposes of greatly superior forces for this mission. He is safe from risks.

Moltke's manœuvre does not involve the idea of fixing the enemy by a partial fight any more than does Napoleon's; non-offensive methods, a state of expectancy, and even retreat are as necessary to one as to the other. This is what Steinmetz did not understand on his own account in 1870.

In Moltke's plans of campaign one finds a number of operations projected following a single type very different from the preceding. They consist of engaging the fight on two fronts forming a pronounced angle, and of which one front is marked by an important watercourse.

Whereas Napoleon, waging a war that was all movement, only employed watercourses to mask his movements to and fro, Moltke makes of them defensive positions.

Does he imagine that the French have violated Belgian neutrality? Then an army will await them on the Lower Rhine, and another will attack their right flank, debouching between Treves and Coblenz.

If they advance from Metz on Cologne, they will be checked on the Moselle and taken in flank by an army which will debouch from Mainz and Rastadt.

Finally, if they march from Metz and Strasburg towards Mainz and Frankfort, Moltke will on this side oppose them but feebly. He gathers the bulk of his

forces on the left bank of the Rhine close to the Moselle, and it is from there that he will take the offensive.

Is it a question of war against Austria when the King of Prussia is not willing to attack? Moltke will accept the contest on the Elbe. If the Austrians advance by the left bank of this river, a weak detachment of the Prussian army will stop them between Wittenburg and Torgau, the main body will attack their left flank in the region of the Mulde.

If, on the other hand, the Austrians march on Berlin by the right bank of the Elbe, the Prussian army will debouch between Dresden and Torgau to take them in flank and rear. What is to be noted here is not only the form of this manœuvre, which is new, but the extraordinary audacity that inspires it. Moltke makes frequent use of flank and rear positions. He places himself in situations where, once battle is accepted, the beaten side will lose all. But he has confidence in his strength; it is not possible for him not to win, and he wants to put the enemy into situations from which there is no way out.

Moltke is often misjudged; men see in him the cold and accurate calculator; they fail to recognise his unlimited confidence and boldness, the true hallmark of great warriors. He did not become victor at Sadowa, Metz, and Sedan with the aptitudes of a mere head of a department. Moltke has the supreme gift of the great captains—confident boldness. He takes naturally, and with unaffected calm, decisions of remarkable audacity. No one has surpassed him on these lines. He does not believe in defeat. He does not hesitate to lose his own communications in order to cut those of the enemy; for him there are no doubts

—the question is never asked; for it is the enemy that will be beaten. It does not enter his head to preserve his line of retreat on Berlin, since he must win; the essential is to block the enemy, to push him back against the Rhine or the Elbe, for his destruction is certain.

The man capable of such conceptions remains unshakeable amidst dangers, and immediately and calmly takes the greatest decisions in the most critical moments. If he places imperfect methods at the service of his strategic ideas, he at least impresses on the operations a correct and strong direction; he leads his armies to the goal without allowing himself to be distracted by secondary questions. At every moment he discerns immediately the most important objective against which the operations must be directed.

It is thus that on the night of Gravelotte, when the battle appears lost, or at any rate undecided, and when the great Bismarck openly gives voice to the opinion that the offensive should be renounced, Moltke gently declares that he is about to give the order for an attack on the following morning. And as soon as victory is assured and Bazaine has retired into the fortress of Metz, Moltke does not lose a moment in ordering the march on Paris. These are the master qualities, audacity and decision, that one finds in his acts as in his writings; they are those to which the great victories are due.

§ 4. MOBILISATION AND CONCENTRATION

Nineteenth-century Prussia introduced into war two operations which were almost unknown in preceding ages: mobilisation and concentration.

In all ages it was necessary to increase the effectives so as to undertake a campaign, and to supply them with various objects with which regiments were not furnished during peace time: provisions, ammunition, vehicles, etc. This is what the Germans call "making mobile," *mobil machen*, whence the name *Mobil-machung*, which was translated into French as *mobilisation*.

Prussia, which for a long time had passed regularly from a peace footing to a war footing by incorporating complementary trained men, did not fail to regulate this mobilisation; the order and the duration of the different operations were fixed in every detail. The Prussian Great General Staff, which never ceased to prepare for possible wars against Austria, France, and Russia, constantly studied plans of campaign and endeavoured to settle at least the initial disposition of the army, the *Aufmarsch*.¹ This is what Napoleon called the *assembly* of the army, and what we have most improperly since called *concentration*.

As soon as railways became of use in concentration, the Great General Staff under Moltke's direction studied their employment. From 1852, transport and concentration schemes were constantly worked out and kept up to date; every improvement in railroads was made use of to accelerate movement. The War Office gradually shortened the time of mobilisation. The progress made was prodigious; the Prussian army, which, according to the schemes of

¹ *Aufmarsch* does not mean either deployment or concentration. It is the operation accomplished when the elements of a column separate and group themselves at wide intervals in waiting formations.

1859, could only be concentrated on the 35th to the 42nd day, was in 1870 ready on the 19th day. And this result seems all the more astonishing when one knows the small output of the German railways at that time.

During the earlier studies of mobilisation and railway concentration some officers thought of combining the two operations. They considered that to wait for the completion of mobilisation before beginning the transport work of concentration was needlessly to delay the arrival of the heads of the columns in the frontier region. They proposed, therefore, first of all to transport the troops at peace strength, and to make the reservists join them later. This solution was discarded, and Prussia had no reason to repent of it. The great simplicity of its transport system contributed greatly to success in 1870. The French, on the contrary, first assembled their troops on a peace footing in Alsace and Lorraine, and only then began to send them the reservists, provisions, ammunition, articles of equipment, and vehicles necessary for passing to a war footing. This transport work, undertaken without preparation, resulted in incredible disorder. Whole trains of supplies and ammunition were forwarded to Metz without *personnel* to unload them. The stations and the lines were soon encumbered with packages and trains to such an extent that movement became impossible. It was necessary to stop the transport of *personnel*, and 200,000 reservists had to be kept at the *dépôts*. This was one of the chief reasons for defeat. At the same time the troops who had been sent to the frontier without the necessary *matériel* which it was intended should follow them;

complained of lacking everything. The moral effect was disastrous.

Since 1871 mobilisation and concentration have been carefully studied in all armies; so carefully, that many officers engaged in this work see in it the whole of preparation for war and lose sight of operations properly so called.

The concentration-transport is regulated according to the plan settled for the first dispositions; it may be modified and undergo variations. These latter are carried out by mixed commissions established at what are called regulating stations.

The zone in which the detrainments take place during concentration is more or less distant from the frontier, according to the plans of the higher command. It will be very near the frontier if we can count *both on numerical superiority at the beginning and on having a great start* in relation to the enemy. Then we can assume the offensive and attack him before he has finished his concentration.

In every case detrainment and concentration should be made safe from all interference by the enemy. If we cannot count both on initial superiority and on a great start in transport, it is necessary to carry out detrainment so far from the frontier that the enemy cannot disturb it. Let us suppose, for example, that the enemy has a start of four days; we must then leave a distance of at least four marches between the most advanced zone of detrainment which we can attribute to the enemy and that which we adopt ourselves.

Other considerations assist in determining the zone of concentration. The general may choose to pull it

back to await promised reinforcements. On the other hand, he may press his offensive if he is the stronger at the beginning and wishes to prevent the enemy getting reinforcements. If he has superior numbers and superior skill, he will try to carry the contest into a wide and easy zone in which he can manœuvre. If he is the weaker and has no hope of reinforcements, he will seek a more restricted and difficult zone. If he wishes to fight defensively, he will fix his choice on a favourable position, etc.

All these conditions are taken into consideration when the choice of the zone of concentration is being made, and it is essential that it should suit the general's plans. It must not happen that he finds himself fettered by measures taken in spite of him, or obliged to wait when he wishes to assume a prompt offensive. Neither must he open the campaign by retreating before the enemy. A concentration effected at a great distance from the frontier offers drawbacks ; it means abandoning part of the national territory to the enemy and leaving him entire liberty of action. But it may present advantages by obliging the enemy to entangle himself with the fortresses of the frontier zone, while we are able to give battle in a less confined region, in which it is possible for us to manœuvre, and do so more easily than the invader. The decision to be taken in such a case is the most momentous that can fall to the lot of a general. The faults he then makes are irrevocable.

CHAPTER V

WAR IN THE TWENTIETH CENTURY

§ I. THE NEW CONDITIONS OF WAR

MUCH more important progress was made in things concerning war in the nineteenth century than in any other. Everything was developed, transformed, augmented, and not in weapons only, but also in means of subsistence, and above all, in means of communication.

The progress in armament has modified both the combat and the battle; but great as this progress has been, it has not been of a kind to transform war as a whole. Let us imagine an army endowed with the most modern weapons, but numbering only 200,000 men, and only having at its disposal the means of communication in use in 1806. The principles and procedure which it would then be suitable to apply to the operations of war would be practically the same as those of a century ago.

But it is quite different if we take into consideration the two great changes which most concern the movements of armies, *i.e.* progress in the means of communication and increase in effectives.

The invention and development of railways have led to various important consequences: traffic and

commercial and agricultural activity have reached an unheard of intensity. The production of food commodities and the closeness of the network of railways have increased this activity in huge proportions. In addition to rapid transport by rail, they allow of the mobilisation and revictualling of much larger armies than was possible at the opening of the nineteenth century.

The fact that armies can be supplied by rail has originated new conditions in war. These conditions, which are inherent in the use of railways, will no doubt disappear when further progress has brought the employment of road convoys into use once more.

We have seen that Napoleon put all his magazines and hospitals into a field fortress, that is to say, made them safe from the sudden attacks of local levies. For the rest, his armies were not so numerous as to be unable to live exclusively on the country. For all these reasons they never ran the risk (except in the case of having met with a complete disaster) of being deprived of the necessary resources.

A modern army is not similarly situated, so long as it is revictualled by rail. The troops are so numerous that the country in which they are operating can furnish but a small part of their supplies. Whereas in the nineteenth century it was usual to live on the country and keep the convoys in reserve, now it seems more natural to depend entirely on a base of supplies, leaving the local resources intact to fall back upon, should the railway transport be interrupted.

Be that as it may, generals ought not to allow themselves to be ruled by this system of supply from the rear any more than they were in former days by their

magazines. In this way the freedom of action of the troops is preserved, as at all times, by horsed or motor convoys, of which they should never be deprived.

“Lines of communication” have now a vital importance such as did not attach to them a century ago. The levies in 1813 operated on the rear of the French army with all possible success, and yet did not succeed in starving it. In a modern war, raids like those of Mensdorff, Thielmann, or Colomb would prevent the enemy’s army from keeping the field. To interrupt the line of supplies it would be sufficient to seize some large viaducts and bridges or a few important railway stations, and to stay long enough to effect considerable destruction.

We say such expeditions would prove fatal to the enemy’s army, but it would only be true if the usual blunders have been made and the important points are not protected. It is too often said that Napoleon’s campaigns are ancient history, and some are so convinced of this that they do not even draw from them the most obvious lessons. If Napoleon’s “lines of communication” were absolutely secure, it was so because his “dépôt” was safe from sudden raids. Let us imitate his example; let us protect our great junctions and supply stations on the different lines of communication efficiently, then we shall have a security comparable to that of Napoleon. The enemy’s cavalry may surprise one or two convoys, or make a few unimportant demolitions, but it will not cut off the sources of supply—and will not occasion us more than temporary inconvenience.

It is not a question of turning the towns in which the great stations are into fortresses of the first order,

nor of engirdling them with a huge circle of detached forts without a continuous enceinte: on the contrary we need have only a continuous enceinte proof against field artillery, with no detached forts.

The more important bridges and viaducts should also be protected as the Germans have protected the bridges over the Rhine.

The new means of mechanical transport by which convoys on the road are given a new life will deliver us from the tyranny of the railway. But, notwithstanding, railways for some time to come must be the normal lines of supply. For some time to come they will remain more vulnerable than ever, and would be the natural objective for all guerrilla troops, as well as for large bodies of cavalry. More than ever before, offensive operations will have as their objective the seizure or the menacing of lines of communication.

On the other hand, the immense armies mobilised nowadays will hardly be contained by the theatre of operations. In a Franco-German War, for example, if the troops were deployed between Longwy and Huninguen, their depth would be six men to the yard; it would be three to the yard between Dunkirk and Montbéliard,¹ or between Wesel and Bâle.

If Napoleon, in his sweeping manœuvres in 1800 and 1805, appears to have cast but a coarsely meshed net over his enemy, the armies of the future, it seems, will be more like massive and heavy rollers, crushing all that they pass over.

At first sight one is tempted to think that such

¹ That is on a front from the English Channel to the Jura of the Swiss frontier.

armies are unsuitable for any manœuvre ; one imagines them to be capable only of marching straight ahead into battle to the shock of brute force. This is what Von der Goltz writes :

“ If an army acting on the defensive is not attacked directly in front, and if it is obliged to form front in an unexpected direction, it will find itself in the presence of considerable difficulties. . . . To turn this gigantic mechanism in an unforeseen direction is an operation the difficulty of which is increased by the depth of the concentration, and the wider the front, the longer this takes to do.”

But we should not imagine that armies will be disposed in linear formations. Even though they occupy the whole breadth of the theatre of operations in sufficient depth to give battle, there can never be any question of uniform distribution. The general will hold larger number of troops at his disposal in certain zones where he means to obtain success at any price by developing and repeating his attacks. He will denude other regions where no decision is being sought for, and he will see no great objection to giving way here and there to the enemy.

And even this is but redistribution, the economising of forces for the battle which must not be settled or determined till the decisive moment. While the operations that precede battle are being carried out, quite another distribution may be needed—one which will not warn the enemy of the projected scheme, and which will permit us to check his ; one which lends itself to variations, as the plan itself should do.

Firstly, the great units are grouped in such a manner as to allow of their being moved according to the

change of circumstances, in any direction and with the greatest rapidity. Such movements will habitually be carried out by road. The best methods of grouping and moving the large units called upon to manœuvre in this way are to be found in the Grand Tactics of Napoleon. These units will not be more unwieldy than the army of 1806 and 1807, while the network of roads will offer them greater facilities for movement. This network gives for the most part one carriage-road to every $1\frac{1}{2}$ or 2 miles of front. Thus an army corps of 30,000 men, which on a single road would form a column of 15 to 20 miles in length, may be distributed without inconvenience on several roads. It will be enclosed in a 6-mile square; it becomes a true pawn on the chessboard. Nothing is easier than to move it without loss of time, to concentrate it rapidly on its head or on either flank, and to make it change direction.

An army composed of a group of corps massed in this way can turn about, concentrate, or deploy without difficulty.

Bodies of cavalry and cyclists make it possible to occupy essential points more rapidly, and open the road for the armies. They can be used either as mobile reserves or as means of attack capable of suddenly extending the range of an outflanking movement.

But these are not the only means that modern armies have at their disposal for promptly modifying the distribution of troops in the theatre of operations. In 1859 and 1870 army movements were carried out by rail but slowly, as they were badly organised. The railways of to-day offer far more valuable assistance now that we are accustomed to use them with method

and science. They lend themselves to rapid movements, and allow of the transport of an army from one end of the theatre of operations to the other in a few days. The long parallel railways that follow the course of the Rhine would enable the Germans, for example, to make rapid transportations between Strasburg and Cologne or Aix-la-Chapelle. They might, after having to all appearances piled up their troops and their efforts at one extremity of the theatre of operations, after having repeated their attacks and thus determined the concentration of our forces on one of their wings—they might, I say, suddenly bring their principal strength to bear on the opposite side.

One is tempted to exaggerate the ease and rapidity with which transport is carried out by rail during operations, but one often falls into the opposite extreme. It takes two days to transport an army corps by a double line, and it is possible to convey as many army corps in two days as there are lines running into the zone in which it is intended to operate. But troops conveyed by a single line are detrained on many platforms and sidings, often very far apart. A day, or even more, must be allowed to reassemble the men after detrainment.

Finally, at least two days are needed to prepare for such transportations, but usually the movement would have been worked out and the orders given for it long beforehand. When one knows for certain what use can be made of railway transportation and the resources of the network of lines, it only remains to develop these in the sense desired, and so to facilitate all possible manœuvres in accordance with studies made in peace.

Armies appear more cumbersome to move, but the means which they have at their disposal for movement are more effective.

Also, though the number of troops seems to make it more difficult to exercise command, generals dispose now of infinitely greater facilities for transmitting orders than in the past.

Telegraphy, in admitting of command from a long distance, has completely changed the conditions of war. What a difference existed between the higher command of the Prussian armies in 1870 from the General Headquarters at Versailles, and that of the French armies, or of the Allies, in 1812 and 1813!

Telephones, wireless telegraphy, and visual signalling have come to reinforce the telegraph; cyclists are valuable for the transmission of orders and reports at short distances. Automobiles have almost dethroned the telegraph; they carry with a rapidity only comparable to that of telegraphic transmission, not only written orders, in which no error due to transmission is to be feared, but also officers, and even the general himself.

Thus, in communications, as in transport, the new difficulties are largely surmounted by the new means of action.

It is the same with exploration. If the extent of ground occupied by the armies, as well as the efficacy of infantry fire, makes cavalry exploration almost impossible, dirigible balloons and aeroplanes will soon replace it, and will perhaps furnish intelligence that cavalry would never have been able to procure.

To sum up, it is with war as it is with battle, operations will be as varied and as supple as possible; they

will admit of, and will demand, as much skill as in the past, so long as we make use of all the new means which allow us to gain intelligence, issue instantaneous orders, execute rapid manœuvres.

The last transformations of war only accentuate the evolution accomplished since the middle of the eighteenth century.

1. The battle was formerly independent of the operations: since Napoleon's day it has been intimately linked up with the operations; it now absorbs nearly all the operations.

2. The line of communication, which was so little thought of until Valmy, became very important in Napoleon's day; it now has assumed vital importance.

3. Following a natural law, recent industrial and military progress has favoured the defensive in frontal fights; but the offensive is more potent in imposing battle and in forcing decisions to one's advantage, for the assailing army occupies the whole theatre of operations and sweeps all away on its passage.

2. THE APPLICATION OF PRINCIPLES TO MODERN WAR

It is said that the great principles of war are unchangeable; that they are simple commonsense truths, and stand for all time. We should not exaggerate the import of this assertion: the great principles which were true yesterday will also be true in the future, though many among them will be out of date and will not be susceptible of current application. Others no less eternal, but of which no one had thought, will perhaps make their appearance.

Rules of conduct deduced immediately from princi-

ples will even more certainly fall into desuetude. Let us review those which Napoleon laid down, and let us see how many of them are still applicable to-day. The unity of the line of operations was no longer respected in 1813. Directly revictualling was done by rail it never could matter again, because one line served four or five army corps.

The unity of the line of operations had a double importance in Napoleon's eyes: it facilitated the protection of magazines and convoys, and it assured unity of action. As far as the protection of convoys goes, it can be assured in other ways in the future. As for unity of action and the assembly of forces, they are afforded as much security by the general conditions of modern war as the unity of the line of operations afforded them in the past.

In the days when an army in active operation covered only 30 or 40 miles in width, one might have been tempted to form two armies on such a theatre of operations as is Western Germany, and to assign to these armies separate objectives and independent generals. In future the troops mobilised will hardly be contained in the whole width of the theatre of operations. How, then, can they be under more than one commander, and how can he fail to keep them united?

The armies of the two belligerent powers will face each other, barring from side to side the enclosed space in which they are about to fight. They will march towards each other to engage in battle, and it is difficult to think that in the future there can be any objective save this encounter. Even if they wished it, they could not neglect the army of the enemy in order to occupy a town or a province.

Formerly it was necessary to remind men and to plead endlessly for unity of command, unity of action, the assembly of forces, the seeking to bring about a battle without thought of secondary objectives. In future it seems that all these dictates of the great masters will have become unnecessary.

And yet they have not ceased to be correct ; but their applicability is presented in such new guise that one scarcely recognises it.

If the fact that armies are deployed across the entire width of the theatre of operations with the depth requisite for action excludes the tendency to division, it will, on the other hand, give rise to many other temptations, which one will still resist if one is imbued with the old principles.

When it comes to moving the masses of troops which a European war would bring into play, one thinks first of deploying them in a continuous homogeneous line of almost invariably equal depth, with which one thinks one would, without further combination, be in a situation to give battle. Else, giving to an assembly of two millions of men not the depth, but the dimensions of the grouping of six army corps in the Napoleonic wars, we pile up these masses in a narrow space where they would offer an easy prey to the adversary.

We should not act thus if we remembered the profound meaning of the Napoleonic principles. If we want a united army, it is not in order to get men shoulder to shoulder, but to enable the general to employ them all in the same action in the manner which suits both his plans and the circumstances. This is what the old principle, "Keep an army to-

gether," means to us to-day, and its application exacts as much forethought and talent as it ever did.

If Napoleon wanted a single commander, a single line of operations, it was in order that all his forces might be moved by a single will, directed by a single mind, towards an identical objective. It is not enough to have a commander-in-chief and an army deployed without intervals; a master idea, according to which the army is to act, is also necessary. Everything must be co-ordinated, all movements should be linked up and combined with the view of common action.

From another point of view there is also reason for ensuring the union of forces. People often neglect what Clausewitz calls the economy of forces "in time"—that is to say, they decide to bring all the forces at their disposal to bear in the same theatre of war, but *successively*. Clausewitz quoted the example of Austria in 1796; we have a still more remarkable one in 1870. A professional army, comprising but a small number of reservists, was crushed at Froeschwiller and Gravelotte. Another army, mainly composed of reservists, was offered up as a holocaust at Sedan. These two armies numbered 300,000 men. There were still at the *dépôts* 296,000 men of the active and reserve armies. From August 15 there were 100,000 *gardes mobiles* under arms who by September were ready to march. Thus, by refusing to fight in the middle of the month of August, it would have been possible to assemble 600,000 or 700,000 men by the first day of September. On the pretext that they were of unequal value the troops were made to fight in detail.

"We must," said Colonel Foch in 1900, "*make use of all our troops, whatever their kind.*" What folly

to reserve the less good men for the despairing struggle of the last hour! Would not the *mobiles* of Coulmiers, Bapaume, and Villersexel have fought more usefully side by side with the army of Châlons?

In future, as in the past, we must employ all the living forces of the nation, employ them in common action together and in the same battle. We must not put forward excuses about the mediocre quality of certain troops, for there is no battalion which we shall not be obliged (and glad) to fall back upon in the hours of despair.

§ 3. THE OFFENSIVE AND THE DEFENSIVE

It would be absurd to think that one can fight without hitting out. The attack is the normal mode of action in war.

No one should be allowed to command armies who is not disposed by nature to take the offensive. Far from fearing the struggle, a general should desire it, be eager to fight; he should not allow himself to go to the battle, he should march there resolutely, fully conscious of his actions, with a free and active spirit directing his will.

There is nothing in this, it seems, but what is simple and natural, and yet nothing is more rare. "It is difficult," said Napoleon, "to form any exact idea of the strength of soul needed to deliver with a full appreciation of the consequences one of those great battles on which the fate of an army or of country depends. Therefore it is very rare to find generals eager to give battle."

A general who was not of this temper, and who

feared the dangers and responsibilities of battle, would be condemned to irresolution, to immobility, or to counter-marches. For such a man, the attitude called defensive would be the outcome of his timidity and his hesitations. This is not a halt or a retirement decided on in full knowledge of the situation, by a general worthy to command and impatient to resume the offensive at the first opportunity. Such a man would find it easier to attack than to act on the defensive. In postponing a battle he does it in spite of himself. Perhaps it is dangerous to recall the fact that great leaders have not always acted offensively; it may serve timid men as a pretext for clinging to the defensive themselves. But it must nevertheless be stated: if it is necessary to assume the offensive in the operations taken as a whole and in the final phase, it is often only possible to operate by postponing the fight for a certain time, and at certain points.

Napoleon gave an example of this in 1796, on the Adige, and again in 1813, when he halted on the Elbe. He gave an example of this even when taking the offensive in 1806, and in 1807, when he ordered the army corps nearest to the enemy to refuse to engage while awaiting concentration. Blücher, in 1813, retreated when he thought it necessary as a means of assuring the success of the concentric advance on Leipzig.

But in repeating this statement we must still insist on the fundamental difference between the deliberate retreat of a Blücher and the inertia of a Brunswick or a Bazaine.

The most serious faults in war are passivity and

stagnation. If they translate themselves into the defensive—that is to say, into the expectation of the blows of the enemy—they also manifest themselves, in a slighter degree, in what may be called the passive offensive, that is to say, the advance without a reasoned plan of action. Generals incapable of carrying out any operation, of imagining any combination, sometimes push forward without any predetermined intention. They do not wait for the enemy's blows, but go to meet them, driven forward by public opinion, or by some vague feeling of the duty which numerical superiority imposes. This conduct has some advantage over the defensive, in so far as it does not leave the enemy in undisturbed leisure to combine his manœuvres; but it offers him an easy target since it opposes no will to his will.

This is the kind of offensive that many people think will be inevitable in the next war. We have seen that in this supposition there is a fundamental error: that the forces will be able to group themselves, if not as in 1806, 1807, or 1813, at least in accordance with analogous principles—in short, that one can and one ought to manœuvre.

To sum up, the most keen and resolute offensive spirit is necessary, though without any compulsion to a blind offensive. He who is not capable of dominating events should remind himself of the Napoleonic precept:

“The worst decision in war is the pusillanimous, or, if you like, the prudent, decision. For a general, true wisdom lies in energetic determination.”

It is impossible to calculate all the consequences of a movement. “One sees one's own ills, but not

those of the enemy," and an offensive movement at least has this assured advantage—that it hampers the projected operations of the enemy, obliges him to face a new set of circumstances, to take hurried measures, often to commit mistakes. "All initiative," says a German writer, "however defective, is capable of checking the projects of the enemy and of tiring out his troops."

There is no more burning question than that of the offensive: we are unwilling to demonstrate that it should not be adopted invariably and in all places; and yet, while pointing out the advantages of the offensive, we must not fall into the opposite extreme. How many times has not the offensive been undertaken rashly, in insufficient strength, and the issue been a defeat, a retreat, an untimely check quickly followed by disaster? Examples are familiar to all; they are not pondered over enough. Mack marching from Vienna to Ulm, fearing to advance farther, yet unwilling to retreat, and thus allowing himself to be taken. Brunswick advancing into Thuringia, then feeling his inferiority, marking time there, retreating too late, ending at Jena. Napoleon III. leading his army corps to the Prussian frontier to fight the ridiculous engagement of Saarbruck; then, feeling all the superiority of the enemy, unable to advance, ashamed to retreat, abandoning himself to inevitable defeat.

As these examples show us, it is not offensive action after contact is obtained that destroys armies; it is the initial movement, or rather, the too advanced assembly of the army. Mack, Brunswick, Napoleon III., did not act offensively; they advanced too far forward to begin with, and assembled their armies

too close to the enemy without taking into consideration that they were unable to attack.

It is very rare, in fact quite exceptional, that a general has ever repented of taking the offensive with resolution and of attacking with vigour. It is very common, on the other hand, that generals should first advance their army, and then, at the moment when they expect to meet the enemy, perceive that they are not strong enough and that they will be crushed.

In the European war of the future the troops will be detained in what is called the zone of concentration. The preceding observation is applicable to the choice of this zone. One need hardly say that one should not make war if one cannot sooner or later count on having superiority. The army should be assembled nearer to or farther from the frontier, according as one expects to be more or less quickly in possession of this superiority.

Thus one arranges for detrainment close to the frontier if one believes oneself to have superiority from the beginning, and all the more so if one believes one will only have it *at* the beginning. It is then to one's interest to assume the offensive as quickly as possible. On the other hand, a general who believes himself to be inferior at the outset and expects to be stronger at the end of a few days, assembles his army far from the frontier if only he can find an area at some distance from it which would be suitable for his plans. He shows his judgment in the choice he makes of a zone of assembly for the armies. He manifests his greatest qualities in the decision and vigour with which, once the moment has come, he passes to the offensive.

“At the outset of a campaign,” said Napoleon, “one must thoroughly consider whether one ought or ought not to advance; but once one has assumed the offensive, it must be maintained to the last extremity. . . . The whole art of war consists in a well-reasoned and extremely circumspect defensive, and in an audacious and rapid offensive. . . . War can only be made with vigour, decision, and a constant will. One should not fumble or hesitate. When one determines to conquer, one can communicate one’s energy to all. A rapid march heightens the *moral* of the army, it increases the chances of victory.”

And, above all, the general must have a will, work on a plan. “One only accomplishes great things when one knows how to concentrate oneself entirely on one object and to march despite all obstacles to one goal.”

One will attain it by battle, because “no result can be arrived at without battle.” Once the battle is joined, no matter what be the issue, the activity of the general should not relax: “the prime quality of a warrior is that he should let neither victors nor vanquished rest.”

§ 4. WAR AND POLICY

We have studied how combat, battle, and major operations were evolved and conducted; we know approximately the instrument placed at the disposal of political powers to enable them to obtain by force the result which they were unable to attain by negotiation. It remains for us to state in a few words what, from the point of view of war, are the reciprocal duties of the political and military authorities.

Strictly speaking, the political authority has no duties as such to the military authority; it can dispose of it according to its fancy, but it is answerable to the nation, and has the very clear duty of acting in conjunction with the military authority in the manner that most conforms to national interest.

The Government of Napoleon III., and particularly that of the Regency before September 4, incurred no more terrible responsibility than that of interfering with the leadership of the armies. The rights of a government over its generals, and the limitation of these rights, are determined by national interest.

It is the right and the duty of a government to indicate to a general the object of the military operations and to cashier the leaders who show themselves unworthy or incapable of command. This last measure is often the only one by means of which it is expedient that a government should influence operations. It is the strictest duty of the political authority not to engage in a foolish war without hope of victory—that is to say, without hope of sooner or later gaining the superiority. There is no exception save in cases of desperation, when it is known that a nation is doomed, and nothing remains but to sell life dearly to save honour. The general is aware of this and acts accordingly. In all other cases it is a crime to make war without being certain of superiority.

Can a war undertaken with serious chances of success have a more or less limited object? Is it possible to fix a restricted objective for a general? Can any general propose to himself anything short of the ruin of the enemy's armies?

Up to the end of the eighteenth century the stronger

of two adversaries could only attain a decision by seizing first one province, then another, and by besieging fortresses. The war dragged on, and the victor was able to abase the vanquished without destroying him by taking territory which could never be reconquered by its former owner, except through a series of distant events impossible to foresee. It was possible to assign the conquest of a province as an object of a war, knowing that the advantage obtained would never be lost, and that it would need ten years of effort and enormous expenditure to gain more.

Clausewitz still considered that war of limited scope was possible in his day, but there is no proof that this opinion is justified. At all events it no longer seems to be possible in the twentieth century for European wars. Japan was able to make war on Russia, in order to lay hands on Manchuria and nothing else, and obtained the desired result without putting the Russian army out of action ; the efforts necessary to either party to prolong the struggle and modify the results were out of all proportion to the interests at stake. It can never be the same in Europe : without speaking of the passions that would animate most of the belligerents, the material conditions of modern war no longer admit of avoidance of the radical decision by battle. The two armies occupying the whole area of the theatre of operations march towards each other, and there is no issue but victory. It is impossible to avoid the encounter, impossible also to seek in it but a half-success. It seems as though the distinction made by Clausewitz in the last century between an absolute offensive and an offensive with a limited objective is no longer to be made, at any rate

as far as European war is concerned. Therefore, the indications which a government should give to a general on the political object of war are reduced to very small limits.

Once the war is decided on, it is absolutely necessary that a general should be left free to conduct it at his own discretion, subject to seeing himself relieved of his command if he uses his discretion with but little energy or competence. The plan of campaign should be the personal work of the general; it has hardly ever happened that the interference of a government in the conduct of operations has produced happy results. The action of the Committee of Public Safety was successful because Carnot was a professional soldier directing improvised generals. The unseasonable orders of the famous Aulic Council in Vienna during the wars of the Revolution are well known. We know too how MacMahon was sent from Châlons to Sedan with his army; how the mistaken manœuvres of Loigny and Beaune-la-Rolande were ordered. And quite lately we have seen the trouble brought on the operations of General Kuropatkin by superior orders.

Napoleon is very clear on this subject.

Every general who undertakes to carry out a plan which he thinks bad and disastrous is a criminal; he must make representations, and insist that it be changed, and in the end hand in his resignation sooner than be instrumental in the ruin of his own men.

Faithful to this principle, Napoleon offered to resign in May 1796, sooner than execute an absurd plan of the Directorate, and in 1800, being unable to make Moreau understand the advantages of an

admirable plan he was recommending to him, he did not insist that he should execute it.

Jomini, brought up in Napoleon's school, says that the political authority has no right to intervene until the success of a campaign has been decided. The expression is not correct: the political authority has every right, but it would commit a blunder in imposing its manner of viewing the situation on a general who was in charge of the operations.

The campaign of 1813 presents to us the most singular and unexpected of examples—the political authority and the military authority united in a single man; the first exercising a fatal influence over the second. Napoleon several times expresses the opinion that it is necessary to march to Berlin and crush Bernadotte before attacking Blücher; but he hangs on to Dresden, by the political importance of which he is obsessed.

The differences that arose between Bismarck and Moltke under the walls of Paris are often spoken of: the politician demanded, insisted, on the bombardment; the general wished to carry on regular operations. It hardly seems possible to justify Bismarck's pretensions; he might have said of what importance the capture of Paris was to him, or given orders that they should make that their business, rather than the gaining of victories over the armies of the provinces; but there his rôle ended. Professional soldiers, here represented by Moltke, alone knew by what means that object could be attained, what chance of success a bombardment offered, what inconveniences it would entail in case of failure.

It is not only the intervention of governments that

is to be feared ; it is above all the intervention of peoples. This is due to thoughtless passions, and in consequence is usually unreasonable. It imposes unreasonable battles and shameful capitulations.

The numerous and passionate proletariats of great capitals send armies to their ruin, and above all, it is in their name that armies are sent to their ruin ; in their name that a Napoleon III. is obliged to remain on the frontier with 240,000 men against 500,000 ; that a MacMahon is forced to hurl himself into the abyss.

Though the populace does not always impose such disastrous operations, it always assigns an exaggerated importance to the capital. Sometimes, as in 1870-1, it becomes the object of active operations, distracting the attention of generals from what ought to be their only care—victory in the field ; sometimes it obliges them to give battle before a capital, instead of postponing the decision.

Far from provoking or exploiting the populace, the duty of political authorities is to pacify, and, if necessary, to suppress popular movements. Once war has begun, the general entrusted with command and possessing the confidence of the nation should act in all freedom. The government should not only respect, but it should assure, this freedom of military action.

It is not by intervening in the operations of a war, but in prosecuting on parallel lines the operations of policy that success is made attainable. The more restricted armies are in their theatre of operations, the more difficult do decisive manœuvres become, and thus great results become due to interventions and the overthrow of alliances. Diplomatic action is more important than ever.

CONCLUSION

WE should not study the science of war save to discover, if not the secret of victory, at any rate the causes that contribute to success or defeat. All our studies and researches would be vain if they did not lead to some conclusions on this subject. We must not, however, expect them to be very precise or formal. An infinite variety of elements comes into play in war ; some are altogether material, while others are of a moral or intellectual order. Sometimes one element, sometimes another, gains the advantage, as the case may be. When armies of the same value, commanded by good generals, are facing each other, it is numbers—the material element—which is the deciding factor. It is again the deciding factor when numerical superiority is such that the genius of a Napoleon would not suffice to re-establish the balance.

On the other hand, there are circumstances in which the superiority of strength, discipline, instruction, and command is so great that numbers lose all their weight. This is the case in most colonial wars ; it was also the case when the troops of the Directorate fought those of Naples. The army of a civilised nation has the advantage over the army of a savage people ; but, if the latter makes a little progress, procures improved arms, begins to discipline and

organise its troops, it thenceforward adds to the advantages of civilisation a vigour, a fanaticism, a contempt for death which gives it superiority and enables it to obtain an easy victory over an army which has but the military form and not the warlike spirit. It is thus that the Teutons, the Arabs, the Mongolians, who, though still barbarians, were organised and disciplined and keen in the fight, were easily able to bring about the ruin of decrepit empires. To give a modern example, a French company would beat 2,000 negroes ; but a battalion of Turcos is worth several battalions of European reservists.

There is no hierarchy among the elements of war ; one cannot pretend that one is more important than another. One day Napoleon said, " Victory is to the big battalions " ; the next day he declared that " in an army the men don't count," that " one man is everything." Genius triumphed over numbers at Dresden, and succumbed at Leipzig.

But in spite of these contradictory statements a study of the causes of victory will not be absolutely sterile. The first object of such a study should be the material element, because it is the easiest to deal with.

Superiority in armament is unquestionably of importance, especially when it is very great. It assures the success of European troops against Africans armed with spears and old muskets. When the superiority is slight, it gives but small advantage. It was not the needle-gun that carried the day at Sadowa, it was the infantry that handled it—the same infantry that fought victoriously at Mars-la-Tour against the *chassepot*, a better weapon than the needle-

gun. We should not be negligent about adopting the most perfect arms, but we must not rely too exclusively on them for victory. Numerical superiority in artillery is more important than superiority of armament. "One must have as much artillery as one's enemy," said Napoleon; "one should reckon four guns to every 1,000 men. It is with artillery that one makes war."

A plentiful supply of munitions of war and provisions of all sorts, and especially of the *matériel* necessary for transport and communications, exercises a great, and too often ignored, influence on the issue of battles and of a whole war.

Superiority in cavalry is of vital importance. It alone makes a decisive victory possible and enables us to check the successes of the enemy. It saved the Allies in the first campaign of 1813, and also gave them their terrible revenge at Leipzig. It will not play a lesser part in the war of the future.

A cavalry division numbers about as many men as a regiment of infantry. It is the equivalent of the *personnel* of twenty batteries. However preponderant the rôle of infantry, taken as a whole, we must not forget that in an army of 500,000 or 1,500,000 men a regiment of infantry is of quite inferior importance to a division of cavalry, or to twenty batteries.

Therefore, so long as the artillery does not come up to the proportion of four guns to every 1,000 men, so long as it is possible to create squadrons (a matter of horses and money), and so long as it seems desirable to endow the army with more plentiful means of communication, there is a great advantage in development in these branches. By diminishing to a slight

extent the numbers of infantry, we may increase our chances of success.

“Superiority of numbers,” said Clausewitz, “is the most usual means of victory. It is the most important when it is great enough to neutralise all the rest.”

However bad troops may be, they are never useless, and numbers, if only they are great enough, will give them the advantage. The fights and battles of the second part of the war of 1870-1 seem to demonstrate that troops without any military training, and of which even the cadres are improvised, can gain the advantage over seasoned and well-commanded troops if they fight at odds three or four to one. Sixty-five thousand Frenchmen beat twenty thousand Germans at Coulmiers. At Loigny, Beaune-la-Rolande, and at Le Mans the French had superior numbers, but not a sufficiently marked superiority to win.

We also see that the quality of troops exercises a great influence, since it balances a numerical superiority of two to one, and sometimes more. It need hardly be stated that the most seasoned troops are the best. In the absence of experience of fighting, it is cohesion, mutual confidence, the habit of common life, military training, and education, and, above all, the officers and non-commissioned officers that impart value to troops. Then come the sentiments and passions which animate the army. The best troops are national recruits, when they are animated by keen patriotism, and are well officered and trained. Next to them come professional troops, soldiers by taste and trade. The worst troops are militia, who serve against their will, and are destitute of all training.

But there are no troops so bad that good generals

cannot inspire them. Perhaps the value of the leader outclasses all other elements. There are no physical, intellectual, or moral qualities which are not useful to a general. He cannot have too many : some of them are essential, and among these, in the first rank, are spirit, resolution, intelligence, imagination. We know what that spirit is which inspires vigorous attacks and relentless pursuits ; according to Bonaparte, it is the first quality of a great general. Let us remember the last wars ; defeat was always caused by a lack of spirit and activity, by the torpor and inertia of the general : Benedek waiting at Königgrätz to be enveloped by the Prussians ; Napoleon III. and Bazaine inactive on the frontier, inert before Metz ; the Boers incapable of taking the offensive and of giving the English blow for blow ; Kuropatkin leaving the initiative to the Japanese. In short, there is no quality more precious in a general than activity, keenness, the offensive spirit ; no fault more fatal than inertia.

Resolution is a very special quality ; it seems to be compounded of courage and intelligence—in reality it cannot exist without one and the other ; but one often sees men who are very courageous in a fight and of high order of intelligence, in whom resolution, the faculty of command, is absolutely wanting. Such was Marshal Canrobert ; admirable under fire excellent in council, yet incapable of commanding an army corps on the battlefield. Resolution is the special faculty which enables a man born to command to take his decision on a full knowledge of the situation and yet without perplexity—that is to say, making a rapid calculation on the known factors and inferring the

remainder, he is able then to act without hesitation, without vague fears of mysterious dangers.

Resolution not only implies lucid intelligence and energy ; it also requires imagination and originality. "A general never knows anything for certain," said Napoleon : "never sees his enemy plainly, never knows positively where he is. It is with the eyes of the spirit, by the sum total of his reasoning, by a sort of inspiration, that the general sees, knows, and judges."

On the one side he imagines what the enemy can do ; on the other, he imagines unexpected operations by means of which he can prosecute his offensive. Repulsed before Caldiero, he marches by Verona and Ronco to Arcola. Seeing Masséna blockaded in Genoa, the idea occurs to him of making an army cross the St. Bernard. A plan like that of 1815 presupposes the most fertile imagination and the most powerful mind.

These are the most precious natural gifts a general can have, but they alone will not suffice, and science must fecundate them in order to produce an art. It is not always necessary to acquire this science by intense and prolonged individual application ; if Napoleon was obliged by his genius and his studies to build up his own doctrine and method, the greater number of generals have found theirs already formulated and applied by the preceding generation.

Patriotic feeling seems to hold a very secondary place among the elements we have just enumerated ; we have seen it intervening among the moral forces, taking rank after cohesion and discipline, and balancing a feeble numerical superiority. And yet it is one of the principal factors in procuring success. On it in reality

the other elements of victory depend. Without sincere patriotism of a good stamp, more deep than noisy, young men would never voluntarily submit to the slavery of a military training. The army would have neither cohesion nor discipline, *there would be no way of recruiting the corps of officers*. If a keen spirit of patriotism does not animate the nation, the officers themselves would not be enthusiastic about their profession; they would accomplish their daily tasks like hirelings, they would not have in their hearts that passion of which all offensive spirit and all initiative is born.

It is also necessary that a nation should be animated by a profound and sober patriotism so that it may treat seriously all that concerns war. As we have said, the quality and the abundance of the material are certainly not the most important means of victory, but they are very definite symptoms of the sentiment which inspires a nation. Superficial patriotism is satisfied with appearances, and, when the moment comes, finds but an insufficient and ill-judged organisation.

When a nation thinks of and prepares itself seriously for war with the intention of winning, it gives a free course to the study of war. It places formalism and academic writings among the least of its preoccupations. Knowledge of the great principles of war and of the methods practised by the great leaders are then familiar to all generals and, above all, the feelings which inspire them predispose them to practise sound strategy. The nation whose spirit animates them possesses a group of leaders on whom it can rely. When the hour of battle comes, the nation can do without a special

genius, for its cadres will always be filled by energetic, intelligent, and soundly educated men.

Finally, another most essential thing is that a patriotic people does not choose its generals in the ante-chamber or the club. They do not raise to high command a Soubise or a Villeroi, but a Hoche, a Bonaparte.

Thus patriotism, which at first sight seemed to exert so insignificant an influence on success, is found in the last analysis to dominate everything. It is patriotism that builds up and animates armies, trains the officer corps, causes leaders to arise. Where patriotism is beginning to die in a nation, that nation has but the semblance of a military force ; it keeps up a more or less brilliant façade which will crumble at the first shock.

“There are,” said Montesquieu, “general causes which operate in each monarchy, raising it, maintaining it, overthrowing it ; all accidents are subjected to causes, and if the hazard of a battle, that is to say, of a particular cause, has ruined a State, there was a general cause which ordained that that State should perish through a single battle.”

Montesquieu does not name the cause, but we know it : it is the decline of national feeling.

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