

PRINCIPLES OF WAR



by Carl von Clausewitz

Translated and edited by Hans W. Gatzke

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TABLE OF CONTENTS

Introduction

I. Principles For War In General

II. Tactics Or The Theory Of Combat

1. General Principles For Defense

2. General Principles For Offense

3. Principles Governing The Use of Troops

4. Principles For The Use Of Terrain

III. Strategy

1. General Principles

2. Defensive

3. Offensive

IV. Application Of These Principles In Time Of War

NOTES

INTRODUCTION

by Christopher Bassford

Before Clausewitz left Prussia in 1812 to join the Russian army and resist Napoleon, he prepared an essay on war to leave with the sixteen year-old Prussian Crown Prince Friedrich Wilhelm (later King Friedrich Wilhelm IV, r.1840-1858), whose military tutor he had become in 1810. This essay was called "The most important principles of the art of war to complete my course of instruction for his Royal Highness the Crown Prince" ["*Die wichtigsten Grundsätze des Kriegführens zur Ergänzung meines Unterrichts bei Sr. Königlichen Hoheit dem Kronprinzen*"]. This essay is usually referred to as the "Principles of War." It represented Clausewitz's theoretical development up to that point, translated into a form suitable for his young student. Unfortunately, it has often been treated as a summary of Clausewitz's mature theory--which it most emphatically is not. Rather, it is only a primitive precursor to *On War*. Its subject matter is largely tactical. While some of the more important theoretical concepts of *On War* are fairly well-developed ("friction," for example), many are embryonic and others entirely absent. In particular, and in great contrast to the later work, "Principles of War" is not notably sophisticated in historical terms. It is based almost entirely on the experience of Frederick the Great and the wars with revolutionary France and Napoleon prior to 1812.

The translation reproduced here was done by Hans Gatzke in 1942. A German protestant, Gatzke (1915-87) emigrated to America in 1937. He graduated from Williams College in 1938 and got his master's degree from Harvard the following year. He then taught at Harvard, ultimately receiving his doctorate there in 1947. From 1944 to 1946, however, he was a second lieutenant in the U.S. Army, serving with Supreme Headquarters Allied Expeditionary Forces (SHAEF). He taught at Johns Hopkins from 1947 to 1964 and then moved to Yale.

Gatzke's brief introduction to *Principles* (which is omitted here) raises some doubt that Gatzke was really familiar with Clausewitz's more mature conceptions as expressed in *On War*. It discussed the latter work at some length, but mostly in terms of its emphasis on "moral forces." Gatzke stressed "Clausewitz's unlimited war of annihilation, his absolute war," without mentioning the other possibilities covered by the theory in *On War*. The dustjacket was even more misleading: It showed an armor-clad hand wielding geometric instruments to produce military blueprints. Like the 1936 German edition from which it was derived, Gatzke's version put into italics large sections of the work held to be obsolete (a practice not followed here). Nonetheless, Gatzke praised the book of *Principles* introduction to his theories on the nature and conduct of war." This inaccurate description has prompted many uninformed readers into great leaps of faith: One reviewer of Gatzke's translation credited Clausewitz with remarkable prescience, saying "Clausewitz wrote it [in 1812] ... condensing *all* of the principles and maxims that he subsequently expanded in ... *On War* [1832]." The same reviewer called it "the blueprint from which Nazi Germany has developed the present total war." [*Cavalry Journal*, September-October 1942, p.94.]

This particular work has rarely aroused any enthusiasm among Clausewitz's more theoretically-oriented students, since it fails to reflect many of the most important of its author's later and deeper insights. *Principles of War* is nonetheless interesting in its own right, both as evidence for Clausewitz's personal evolution and as a discussion of warfare in the Napoleonic era by one of its most astute observers. Note, however, that the views Clausewitz expresses herein are not those of Napoleon--of whom he has often and erroneously been proclaimed the "High Priest." Rather, Clausewitz's conceptions are those of his mentor, General Gerhard von Scharnhorst, perhaps the most capable of Napoleon's enemies.



Clausewitz c.1814

THE MOST IMPORTANT PRINCIPLES FOR THE CONDUCT OF WAR

These principles, though the result of long thought and continuous study of the history of war, have nonetheless been drawn up hastily, and thus will not stand severe criticism in regard to form. In addition, only the most important subjects have been picked from a great number, since a certain brevity was necessary. These principles, therefore, will not so much give complete instruction to Your Royal Highness, as they will stimulate and serve as a guide for your own reflections

CARL VON CLAUSEWITZ

I. PRINCIPLES FOR WAR IN GENERAL

1. The theory of warfare tries to discover how we may gain a preponderance of physical forces and material advantages at the decisive point. As this is not always possible, theory also teaches us to calculate moral factors: the likely mistakes of the enemy, the impression created by a daring action, . . . yes, even our own desperation. None of these things lie outside the realm of the theory and art of war, which is nothing but the result of reasonable reflection on all the possible situations encountered during a war. We should think very

frequently of the most dangerous of these situations and familiarize ourselves with it. Only thus shall we reach heroic decisions based on reason, which no critic can ever shake.

Any person who may present this matter differently to Your Royal Highness is a pedant, whose views will only be harmful to you. In the decisive moments of your life, in the turmoil of battle, you will some day feel that this view alone can help where help is needed most, and where a dry pedantry of figures will forsake you.

2. Whether counting on physical or moral advantages, we should always try, in time of war, to have the probability of victory on our side. But this is not always possible. Often we must act AGAINST this probability, SHOULD THERE BE NOTHING BETTER TO DO. Were we to despair here, we would abandon the use of reason just when it becomes most necessary, when everything seems to be conspiring against us.

Therefore, even when the likelihood of success is against us, we must not think of our undertaking as unreasonable or impossible; for it is always reasonable, if we do not know of anything better to do, and if we make the best use of the few means at our disposal.

We must never lack calmness and firmness, which are so hard to preserve in time of war. Without them the most brilliant qualities of mind are wasted. We must therefore familiarize ourselves with the thought of an honorable defeat. We must always nourish this thought within ourselves, and we must get completely used to it. Be convinced, Most Gracious Master, that without this firm resolution no great results can be achieved in the most successful war, let alone in the most unsuccessful.

Certainly this thought frequently occupied the mind of Frederick II during his first Silesian wars. Because he was familiar with it he undertook his attack near Leuthen, on that memorable fifth of December, and not because he believed that his oblique formation would very likely beat the Austrians.

3. In any specific action, in any measure we may undertake, we always have the choice between the most audacious and the most careful solution. Some people think that the theory of war always advises the latter. That assumption is false. If the theory does advise anything, it is the nature of war to advise the most decisive, that is, the most audacious. Theory leaves it to the military leader, however, to act according to his own courage, according to his spirit of enterprise, and his self-confidence. Make your choice, therefore, according to this inner force; but never forget that no military leader has ever become great without audacity.

II. TACTICS OR THE THEORY OF COMBAT

War is a combination of many distinct engagements. Such a combination may or may not be reasonable, and success depends very much on this. Yet the engagement itself is for the moment more important. For only a combination of successful engagements can lead to good results. The most important thing in war will always be the art of defeating our opponent in combat. To this matter Your Royal Highness can never turn enough attention and thought. I think the following principles the most important:

I. General Principles For Defense

1. To keep our troops covered as long as possible. Since we are always open to attack, except when we ourselves are attacking, we must at every instant be on the defensive and thus should place our forces as much under cover as possible.
2. Not to bring all our troops into combat immediately. With such action all wisdom in conducting a battle disappears. It is only with troops left at our disposal that we can turn the tide of battle.
3. To be little or not at all concerned about the extent of our front. This in itself is unimportant, and an extension of the front limits the depth of our formation (that is, the number of units which are lined up one behind the other). Troops which

are kept in the rear are always available. We can use them either to renew combat at the same point, or to carry the fight to other neighboring points. This principle is a corollary of the previous one.
4. The enemy, while attacking one section of the front, often seeks to outflank and envelop us at the same time. The units which are kept in the background can meet this attempt and thus make up for the support usually derived from obstacles in the terrain. They are better suited for this than if they were standing in line and extending the front. For in this case the enemy could easily outflank them. This principle again is a closer definition of the second.
5. If we have many troops to hold in reserve, only part of them should stand directly behind the front. The rest we should put obliquely behind.

From this position they in turn can attack the flank of the enemy columns which are seeking to envelop us.
6. A fundamental principle is never to remain completely passive, but to attack the enemy frontally and from the flanks, even while he is attacking us. We should, therefore, defend ourselves on a given front merely to induce the enemy to deploy his forces in an attack on this front. Then we in turn attack with those of our troops which we have kept back. The art of entrenchment, as Your Royal Highness expressed so excellently at one time, shall serve the defender not to defend himself more securely behind a rampart, but to attack the enemy more successfully. This idea should be applied to any passive defense. Such defense is nothing more than a means by which to attack the enemy most advantageously, in a terrain chosen in advance, where we have drawn up our troops and have arranged things to our advantage.
7. This attack from a defensive position can take place the moment the enemy actually attacks, or while he is still on the march. I can also, at the moment the attack is about to be delivered, withdraw my troops, luring the enemy into unknown territory and attacking him from all sides. The formation in depth--i.e., the formation in which only two-thirds or half or still less of the army is drawn-up in front and the rest directly or obliquely behind and hidden, if possible--is very suitable for all these moves. This type of formation is, therefore, of immense importance.
8. If, for example, I had two divisions, I would prefer to keep one in the rear. If I had three, I would keep at least one in the rear, and if four probably two. If I had five, I should hold at least two in reserve and in many cases even three, etc.
9. At those points where we remain passive we must make use of the art of fortification. This should be done with many independent works, completely closed and with very strong profiles.

10. In our plan of battle we must set this great aim: the attack on a large enemy column and its complete destruction. If our aim is low, while that of the enemy is high, we will naturally get the worst of it. We are penny-wise and pound-foolish.

11. Having set a high goal in our plan of defense (the annihilation of an enemy column, etc.), we must pursue this goal with the greatest energy and with the last ounce of our strength. In most cases the aggressor will pursue his own aim at some other point. While we fall upon his right wing, for example, he will try to win decisive advantages with his left. Consequently, if we should slacken before the enemy does, if we should pursue our aim with less energy than he does, he will gain his advantage completely, while we shall only half gain ours. He will thus achieve preponderance of power; the victory will be his, and we shall have to give up even our partly gained advantages. If Your Royal Highness will read with attention the history of the battles

In both these battles the Emperor Napoleon attacked with his right wing and tried to hold out with his left. The Archduke Charles did exactly the same. But, while the former acted with great determination and energy, the latter was wavering and always stopped half-way. That is why the advantages which Charles gained with the victorious part of his army were without consequence, while those which Napoleon gained at the opposite end were decisive.

12. Let me sum up once more the last two principles. Their combination gives us a maxim which should take first place among all causes of victory in the modern art of war: "Pursue one great decisive aim with force and determination."

13. If we follow this and fail, the danger will be even greater, it is true. But to increase caution at the expense of the final goal is no military art. It is the wrong kind of caution, which, as I have said already in my "General Principles," is contrary to the nature of war. For great aims we must dare great things. When we are engaged in a daring enterprise, the right caution consists in not neglecting out of laziness, indolence, or carelessness those measures which help us to gain our aim. Such was the case of Napoleon, who never pursued great aims in a timid or half-hearted way out of caution.

If you remember, Most Gracious Master, the few defensive battles that have ever been won, you will find that the best of them have been conducted in the spirit of the principles voiced here. For it is the study of the history of war which has given us these principles.

At Minden, Duke Ferdinand suddenly appeared where the enemy did not expect him and took the offensive, while at Tannhausen he defended himself passively behind earthworks. At Rossbach, Frederick II threw himself against the enemy at an unexpected point and an unexpected moment.

At Liegnitz, the Austrians found the King at night in a position very different from that in which they had seen him the previous day. He fell with his whole army upon one enemy column and defeated it before the others could start fighting.

At Hohenlinden, Moreau had five divisions in his front line and four directly behind and on his flanks. He outflanked the enemy and fell upon his right wing before it could attack.

At Ratisbon, Marshal Davout defended himself passively, while Napoleon attacked the fifth and sixth army-corps with his right wing and beat them completely.

Though the Austrians were the real defenders at Wagram, they did attack the emperor on the second day with the greater part of their forces. Therefore Napoleon can also be considered a defender. With his right wing he attacked, outflanked and defeated the Austrian left wing. At the same time he paid little attention to his weak left wing (consisting of a single division), which was resting on the Danube. Yet through strong reserves (*i.e.*, formation in depth), he prevented the victory of the Austrian right wing from having any influence on his own victory gained on the Rossbach. He used these reserves to retake Aderklaa.

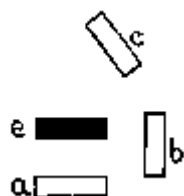
Not all the principles mentioned earlier are clearly contained in each of these battles, but all are examples of active defense.

The mobility of the Prussian army under Frederick II was a means towards victory on which we can no longer count, since the other armies are at least as mobile as we are. On the other hand, outflanking was less common at that time and formation in depth, therefore, less imperative.

2. General Principles For Offense

1. We must select for our attack one point of the enemy's position (*i.e.*, one section of his troops--a division, a corps) and attack it with great superiority, leaving the rest of his army in uncertainty but keeping it occupied. This is the only way that we can use an equal or smaller force to fight with advantage and thus with a chance of success. The weaker we are, the fewer troops we should use to keep the enemy occupied at unimportant points, in order to be as strong as possible at the decisive point. Frederick II doubtlessly won the battle of Leuthen only because he massed his small army together in one place and thus was very concentrated, as compared to the enemy.
2. We should direct our main thrust against an enemy wing by attacking it from the front and from the flank, or by turning it completely and attacking it from the rear. Only when we cut off the enemy's line of retreat are we assured of great success in victory.
3. Even though we are strong, we should still direct our main attack against one point only. In that way we shall gain more strength at this point. For to surround an army completely is possible only in rare cases and requires tremendous physical or moral superiority. It is possible, however, to cut off the enemy's line of retreat at one point of his flank and thereby already gain great success.
4. Generally speaking, the chief aim is the certainty (high probability) of victory, that is, the certainty of driving the enemy from the field of battle. The plan of battle must be directed towards this end. For it is easy to change an indecisive victory into a decisive one through energetic pursuit of the enemy.
5. Let us assume that the enemy has troops enough on one wing to make a front in all directions. Our main force should try to attack the wing concentrically, so his troops find themselves assailed from all sides. Under these circumstances his troops will get discouraged much more quickly; they suffer more, get disordered--in short, we can hope to turn them to flight much more easily.
6. This encirclement of the enemy necessitates a greater deployment of forces in the front line for the aggressor than for the defender.

If the corps **a b c** should make a concentric attack on the section **e** of the enemy army, they should, of course, be next to each other. But we should never have so many forces in the front line that we have none in reserve. That would be a very great error which would lead to defeat, should the enemy be in the least prepared for an encirclement.



If **a b c** are the corps which are to attack section **e**, the corps **f** and **g** must be held in reserve. With this formation in depth we are able to harass the same point continuously. And in case our troops should be beaten at the opposite end of the line, we do not need to give up immediately our attack at this end, since we still have reserves with which



to oppose the enemy. The French did this in the battle of Wagram. Their left wing, which opposed the Austrian right wing resting on the Danube, was extremely weak and was completely defeated. Even their center at Aderklaa was not very strong and was forced by the Austrians to retreat on the first day of battle. But all this did not matter because Napoleon had such depth on his right wing, with which he attacked the Austrian left from the front and side. He advanced against the Austrians at Aderklaa with a tremendous column of cavalry and horse-artillery and, though he could not beat them, he at least was able to hold them there.

7. Just as on the defensive, we should choose as the object of our offensive that section of the enemy's army whose defeat will give us decisive advantages.

8. As in defense, as long as any resources are left, we must not give up until our purpose has been reached. Should the defender likewise be active, should he attack us at other points, we shall be able to gain victory only if we surpass him in energy and boldness. On the other hand, should he be passive, we really run no great danger.

9. Long and unbroken lines of troops should be avoided completely. They would lead only to parallel attacks, which today are no longer feasible.

Each division makes its attack separately, though according to the directions of a higher command and thus in agreement with each other. Yet one division (8,000 to 10,000 men) is never formed into one single line,

but into two, three, or even four. From this it follows that a long unbroken line is no longer possible.

10. The concerted attacks of the divisions and army corps should not be obtained by trying to direct them from a central point, so that they maintain contact and even align themselves on each other, though they may be far apart or even separated by the enemy. This is a faulty method of bringing about cooperation, open to a thousand mischances. Nothing great can be achieved with it and we are certain to be thoroughly beaten by a strong opponent.

The true method consists in giving each commander of an army corps or a division the main direction of his march, and in pointing out the enemy as the objective and victory as the goal.

Each commander of a column, therefore, has the order to attack the enemy wherever he may find him and to do so with all his strength. He must not be made responsible for the success of his attack, for that would lead to indecision. But he is responsible for seeing that his corps will take part in battle with all its energy and with a spirit of self-sacrifice.

11. A well-organized, independent corps can withstand the best attack for some time (several hours) and thus can not be annihilated in a moment. Thus, even if it engaged the enemy prematurely and was defeated, its fight will not have been in vain. The enemy will unfold and expend his strength against this one corps, offering the rest a good chance for an attack.

The way in which a corps should be organized for this purpose will be treated later.

We therefore assure the cooperation of all forces by giving each corps a certain amount of independence, but seeing to it that each seeks out the enemy and attacks him with all possible self-sacrifice.

12. One of the strongest weapons of offensive warfare is the surprise attack. The closer we come to it, the more fortunate we shall be. The unexpected element which the defender creates through secret preparations and through the concealed disposition of his troops, can be counterbalanced on the part of the aggressor only by a surprise attack.

Such action, however, has been very rare in recent wars, partly because of the more advanced precautionary measures, partly because of the rapid conduct of campaigns. There seldom arises a long suspension of activities, which lulls one side into security and thus gives the other an opportunity to attack unexpectedly.

Under these circumstances--except for nightly assaults which are always possible (as at Hochkirch)--we can surprise our opponent only by marching to the side or to the rear and then suddenly advancing again. Or, should we be far from the enemy, we can through unusual energy and activity arrive faster than he expects us.

13. The regular surprise attack (by night as at Hochkirch) is the best way to get the most out of a very small army. But the aggressor, who is not as well acquainted with the terrain as the defender, is open to many risks. The less well one knows the terrain and the preparations of the enemy, the greater these risks become. In many instances, therefore, these attacks must be considered only as desperate means.

14. This kind of attack demands simpler preparations and a greater concentration of our troops than in the daytime.

3. Principles Governing the Use of Troops

1. If we cannot dispense with firearms (and if we could, why should we bring them along?), we must use them to open combat. Cavalry must not be used before the enemy has suffered considerably from our infantry and artillery. From this it follows:

(a) That we must place the cavalry behind the infantry. That we must not be easily led to use it in opening combat. Only when the enemy's disorder or his rapid retreat offer the hope of success, should we use our cavalry for an audacious attack.

2. Artillery fire is much more effective than that of infantry. A battery of eight six-pounders takes up less than one-third of the front taken up by an infantry battalion; it has less than one-eighth the men of a battalion, and yet its fire is two to three times as effective. On the other hand, artillery has the disadvantage of being less mobile than infantry. This is true, on the whole, even of the lightest horse-artillery, for it cannot, like infantry, be used in any kind of terrain. It is necessary, therefore, to direct the artillery from the start against the most important points, since it cannot, like infantry, concentrate against these points as the battle progresses. A large battery of 20 to 30 pieces usually decides the battle for that section where it is placed.

3. From these and other apparent characteristics the following rules can be drawn for the use of the different arms:

(a) We should begin combat with the larger part of our artillery. Only when we have large masses of troops at our disposal should we keep horse and foot-artillery in reserve. We should use artillery in great batteries massed against one point. Twenty to thirty pieces combined into one battery defend the chief part of our line, or shell that part of the enemy position which we plan to attack.

(b) After this we use light infantry--either marksmen, riflemen, or fusileers--being careful not to put too many forces into play at the beginning. We try first to discover what lies ahead of us (for we can seldom see that

If this firing line is sufficient to counteract the enemy's troops, and if there is no need to hurry, we should do wrong to hasten the use of our remaining forces. We must try to exhaust the enemy as much as possible with this preliminary skirmish.

(c) If the enemy should lead so many troops into combat that our firing line is about to fall back, or if for some other reason we should no longer hesitate, we must draw up a full line of infantry. This will deploy between 100 and 200 paces from the enemy and will fire or charge, as matters may be.

(d) This is the main purpose of the infantry. If, at the same time, the battle-array is deep enough, leaving us another line of infantry (arranged in columns) as reserve, we shall be sufficiently master of the situation at this sector. This second line of infantry should, if possible, be used only in columns to bring about a decision.

(e) The cavalry should be as close behind the fighting troops during battle as is possible without great loss; that is, it should be out of the enemy's grape-shot or musket fire. On the other hand, it should be close enough to take quick advantage of any favorable turn of battle.

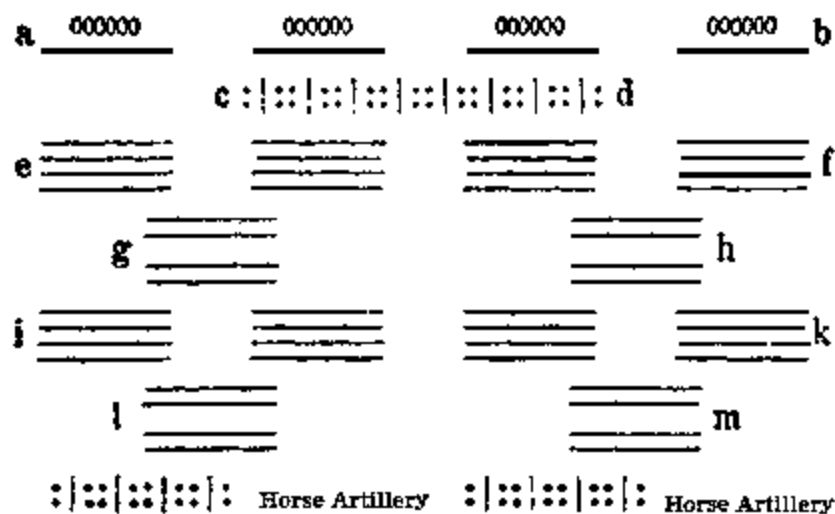
4. In obeying these rules more or less closely, we should never lose sight of the following principle, which I cannot stress enough:

Never bring all our forces into play haphazardly and at one time, thereby losing all means of directing the battle; but fatigue the opponent, if possible, with few forces and conserve a decisive mass for the critical moment. Once this decisive mass has been thrown in, it must be used with the greatest audacity.

5. We should establish one battle-order (the arrangement of troops before and during combat) for the whole campaign or the whole war. This order will serve in all cases when there is no time for a special disposition of troops. It should, therefore, be calculated primarily for the defensive. This battle-array will introduce a certain uniformity into the fighting-method of the army, which will be useful and advantageous. For it is inevitable that a large part of the lower generals and other officers at the head of small contingents have no special knowledge of tactics and perhaps no outstanding aptitude for the conduct of war.

Thus there arises a certain methodism in warfare to take the place of art, wherever the latter is absent. In my opinion this is to the highest degree the case in the French armies.

6. After what I have said about the use of weapons, this battle-order, applied to a brigade, would be approximately as follows:



a-b is the line of light infantry, which opens combat and which in rough terrain serves to some extent as an advanced guard. Then comes the artillery, c-d, to be set up at advantageous points. As long as it is not set up, it remains behind the first line of infantry. e-f is the first line of infantry (in this case four battalions) whose purpose is to form into line and to open fire, and g-h are a few regiments of cavalry. i-k is the second line of infantry, which is held in reserve for the decisive stage of the battle, and l-m is its cavalry. A strong corps would be drawn up according to the same principles and in a similar manner. At the same time, it is not essential that the battle array be exactly like this. It may differ slightly provided that the above principles are followed. So, for instance, in ordinary battle-order the first line of cavalry g-h can remain with the second line of cavalry, l-m. It is to be advanced only in particular cases, when this position should prove to be too far back.

7. The army consists of several such independent corps, which have their own general and staff. They are drawn up in line and behind each other, as described in the general rules for combat. It should be observed at this point that, unless we are very weak in cavalry, we should create a special cavalry reserve, which, of course, is kept in the rear. Its purpose is as follows:

(a) To fall upon the enemy when he is retreating from the field of battle and to attack the cavalry which he uses to cover up his retreat. Should we defeat the enemy's cavalry at this moment, great successes are inevitable, unless the enemy's infantry would perform miracles of bravery. Small detachments of cavalry would not accomplish this purpose.

(b) To pursue the enemy more rapidly, if he should be retreating unbeaten or if he should continue to retreat the day after a lost battle. Cavalry moves faster than infantry and has a more demoralizing effect on the retreating troops. Next to victory, the act of pursuit is most important in war.

(c) To execute a great (strategic) turning move, should we need, because of the detour, a branch of the army which moves more rapidly than the infantry.

In order to make this corps more independent, we should attach a considerable mass of horse artillery; for a combination of several types of arms can only give greater strength.

8. The battle-order of troops described thus far was intended for combat; it was the formation of troops for battle.

The order of march is essentially as follows:

(a) Each independent corps (whether brigade or division) has its own advanced- and rear-guard and forms its own column. That, however, does not prevent several corps from marching one behind the other on the same road, and thus, as it were, forming a single column.

The corps march according to their position in the general formation of battle. They march beside or behind each other, just as they would stand on the battle-field. In the corps themselves the following order is invariably observed: the light infantry,

with the addition of one regiment of cavalry, forming the advanced and rear-guard, then the infantry, the artillery, and last the remaining cavalry.

This order stands, whether we are moving against the enemy--in which case it is the natural order-- or parallel with him. In the latter case we should assume that those troops which in the battle formation were behind each other should march side by side. But when we have to draw up the troops for battle, there will always be sufficient time to move the cavalry and the second line of infantry either to the right or left.

4. Principles For The Use Of Terrain

1. The terrain (the ground or country) offers two advantages in warfare.

The first is that it presents obstacles to the enemy's approach. These either make his advance impossible at a given point, or force him to march more slowly and to maintain his formation in columns, etc.

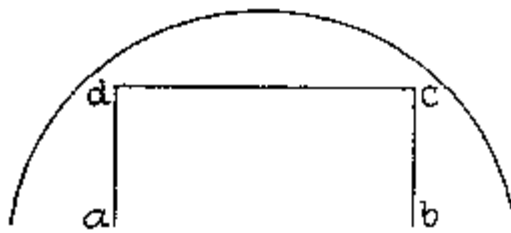
The second advantage is that obstacles in the terrain enable us to place our troops under cover.

Although both advantages are very important, I think the second more important than the first. In any event, it is certain that we profit from it more frequently, since in most cases even the simplest terrain permits us to place ourselves more or less under cover. Formerly only the first of these advantages was known and the second was rarely used. But today the greater mobility of all armies has led us to use the former less frequently, and therefore the latter more frequently. The first of these two advantages is useful for defense alone, the second for both offense and defense.

2. The terrain as an obstacle to approach serves chiefly to support our flank, and to strengthen our front.
3. To support our flank it must be absolutely impassable, such as a large river, a lake, an impenetrable morass. These obstacles, however, are very rare, and a complete protection of our flank is, therefore, hard to find. It is rarer today than ever before, since we do not stay in one position very long, but move about a great deal. Consequently we need more positions in the theater of war.

An obstacle to approach which is not wholly impassable is really no *point d'appui* for our flank, but only a reinforcement. In that case troops must be drawn up behind it, and for them in turn it becomes an obstacle to approach.

Yet it is always advantageous to secure our flank in this way, for then we shall need fewer troops at this point. But we must beware of two things: first, of relying so completely on this protection that we do not keep a strong reserve in the rear; second, of surrounding ourselves on both flanks with such obstacles, for, since they do not protect us completely, they do not always prevent fighting on our flanks. They are, therefore, highly detrimental to our defense, for they do not permit us to engage easily in active defense on either wing. We shall be reduced to defense under the most disadvantageous conditions, with both flanks, a d and c b, thrown back.



4. The observations just made furnish new arguments for the formation in depth. The less we can find secure support for our flanks, the more corps we must have in the rear to envelop those troops of the enemy which are surrounding us.
5. All kinds of terrain, which cannot be passed by troops marching in line, all villages, all enclosures surrounded by hedges or ditches, marshy meadows, finally all mountains which are crossed only with difficulty, constitute obstacles of this kind. We can pass them, but only slowly and with effort. They increase, therefore, the power of resistance of troops drawn up behind them. Forests are to be included only if they are thickly wooded and marshy. An ordinary timber-forest can be passed as easily as a plain. But we must not overlook the fact that a forest may hide the enemy. If we conceal ourselves in it, this disadvantage affects both sides. But it is very dangerous, and thus a grave mistake, to leave forests on our front or flank

unoccupied, unless the forest can be traversed only by a few paths. Barricades built as obstacles are of little help, since they can easily be removed.

6. From all this it follows that we should use such obstacles on one flank to put up a relatively strong resistance with few troops, while executing our planned offensive on the other flank. It is very advantageous to combine the use of entrenchments with such natural obstacles, because then, if the enemy should pass the obstacle, the fire from these entrenchments will protect our weak troops against too great superiority and sudden rout.

7. When we are defending ourselves, any obstacle on our front is of great value.

Mountains are occupied only for this reason. For an elevated position seldom has any important influence, often none at all, on the effectiveness of arms. But if we stand on a height, the enemy, in order to approach us, must climb laboriously. He will advance but slowly, become separated, and arrive with his forces exhausted. Given equal bravery and strength, these advantages may be decisive. On no account should we overlook the moral effect of a rapid, running assault. It hardens the advancing soldier against danger, while the stationary soldier loses his presence of mind. It is, therefore, always very advantageous to put our first line of infantry and artillery upon a mountain.

Often the grade of the mountain is so steep, or its slope so undulating and uneven, that it cannot be effectively swept by gun-fire. In that case we should not place our first line, but at the most only our sharpshooters, at the edge of the mountain. Our full line we should place in such a way that the enemy is subject to its most effective fire the moment he reaches the top and reassembles his forces.

All other obstacles to approach, such as small rivers, brooks, ravines, etc., serve to break the enemy's front. He will have to re-form his lines after passing them and thus will be delayed. These obstacles must, therefore, be placed under our most effective fire, which is grape-shot (400 to 600 paces), if we have a great deal of artillery or musket-shot (150 to 200 paces), if we have little artillery at this point.

8. It is, therefore, a basic law to place all obstacles to approach, which are to strengthen our front, under our most effective fire. But it is important to notice that we must never completely limit our resistance to this fire but must hold ready for a bayonet-charge an important part of our troops (1/3 to 1/2) organized into columns. Should we be very weak, therefore, we must place only our firing-line, composed of riflemen and artillery, close enough to keep the obstacle under fire. The rest of our troops, organized into columns, we should keep 600 to 800 paces back, if possible under cover.

9. Another method of using these obstacles to protect our front is to leave them a short distance ahead. They are thus within the effective range of our cannon (1000 to 2000 paces) and we can attack the enemy's columns from all sides, as they emerge. (Something like this was done by Duke Ferdinand at Minden.⁴ In this way the obstacle contributes to our plan of active defense, and this active defense, of which we spoke earlier, will be executed on our front.

10. Thus far we have considered the obstacles of the ground and country primarily as connected lines related to extended positions. It is still necessary to say something about isolated points.

On the whole we can defend single, isolated points only by entrenchments or strong obstacles of terrain. We shall not discuss the first here. The only obstacles of terrain which can be held by themselves are:

(a) Isolated, steep heights.

Here entrenchments are likewise indispensable; for the enemy can always move against the defender with a more or less extended front. And the latter will always end up by being taken from the rear, since one is rarely strong enough to make front towards all sides.

(b) Defiles.

By this term we mean any narrow path, through which the enemy can advance only against one point. Bridges, dams, and steep ravines belong here.

We should observe that these obstacles fall into two categories: either the aggressor can in no way avoid them, as for example bridges across large rivers, in which case the defender can boldly draw up his whole force so as to fire upon the point of crossing as effectively as possible. Or we are not absolutely sure that the enemy can not turn the obstacle, as with bridges across small streams and most mountain defiles. In that case it is necessary to reserve a considerable part of our troops $1/3$ to $1/2$ for an attack in close order.

(c) Localities, villages, small towns, etc.

With very brave troops, who fight enthusiastically, houses offer a unique defense for few against many. But, if we are not sure of the individual soldier, it is preferable to occupy the houses, gardens, etc., only with sharpshooters and the entrances to the village with cannons. The greater part of our troops ($1/2$ to $3/4$) we should keep in close columns and hidden in the locality or behind it, so as to fall upon the enemy while he is invading.

11. These isolated posts serve in large operations partly as outposts, in which case they serve not as absolute defense but only as a delay to the enemy, and partly to hold points which are important for the combinations we have planned for our army. Also it is often necessary to hold on to a remote point in order to gain time for the development of active measures of defense which we may have planned. But, if a point is remote, it is *ipso facto* isolated.

12. Two more observations about isolated obstacles are necessary. The first is that we must keep troops ready behind them to receive detachments that have been thrown back. The second is that whoever includes such isolated obstacles in his defensive combinations should never count on them too much, no matter how strong the obstacle may be. On the other hand, the military leader to whom the defense of the obstacle has been entrusted must always try to hold out, even under the most adverse circumstances. For this there is needed a spirit of determination and self-sacrifice, which finds its source only in ambition and enthusiasm. We must, therefore, choose men for this mission who are not lacking in these noble qualities.

13. Using terrain to cover the disposition and advance of troops needs no detailed exposition.

We should not occupy the crest of the mountain which we intend to defend (as has been done so frequently in the past) but draw up behind it. We should not take our position in front of a forest, but inside or behind it; the latter only if we are able to survey the forest or thicket. We should keep our troops in columns, so as to find cover more easily. We must make use of villages, small thickets, and rolling terrain to hide our troops. For our advance we should choose the most intersected country, etc.

In cultivated country, which can be reconnoitered so easily, there is almost no region that can not hide a large part of the defender's troops if they have made clever use of obstacles. To cover the aggressor's advance is more difficult, since he must follow the roads.

It goes without saying that in using the terrain to hide our troops, we must never lose sight of the goal and combinations we have set for ourselves. Above all things we should not break up our battle-order completely, even though we may deviate slightly from it.

14. If we recapitulate what has been said about terrain, the following appears most important for the defender, i.e., for the choice of positions:

- (a) Support of one or both flanks.
- (b) Open view on front and flanks.
- (c) Obstacles to approach on the front.
- (d) Masked disposition of troops. And finally
- (e) Intersected country in the rear, to render pursuit more difficult in case of defeat. But no defiles too near (as at Friedland), since they cause delay and confusion.

15. It would be pedantic to believe that all these advantages could be found in any position we may take up during a war. Not all positions are of equal importance: the most important are those in which we most likely may be attacked. It is here that we should try to have all these advantages, while in others we only need part.

16. The two main points which the aggressor should consider in regard to the choice of terrain are not to select too difficult a terrain for the attack, but on the other hand to advance, if possible, through a terrain in which the enemy can least survey our force.

17. I close these observations with a principle which is of highest significance, and which must be considered the keystone of the whole defensive theory:

CONSEQUENTLY NEVER TO BE ENTICED INTO PASSIVE DEFENSE BY A STRONG TERRAIN.

For if the terrain is really so strong that the aggressor cannot possibly expel us, he will turn it, which is always possible, and thus render the strongest terrain useless. We shall be forced into battle under very different circumstances, and in a completely different terrain, and we might as well not have included the first terrain in our plans. But if the terrain is not so strong, and if an attack within its confines is still possible, its advantages can never make up for the disadvantages of passive defense. All obstacles are useful, therefore, only for partial defense, in order that we may put up a relatively strong resistance with few troops and gain time for the offensive, through which we try to win a real victory elsewhere.

III. STRATEGY

This term means the combination of individual engagements to attain the goal of the campaign or war.

If we know how to fight and how to win, little more knowledge is needed. For it is easy to combine fortunate results. It is merely a matter of experienced judgment and does not depend on special knowledge, as does the direction of battle.

The few principles, therefore, which come up in this connection, and which depend primarily on the condition of the respective states and armies, can in their essential parts be very briefly summarized:

1. General Principles

I. Warfare has three main objects:

- (a) To conquer and destroy the armed power of the enemy;
- (b) To take possession of his material and other sources of strength, and
- (c) To gain public opinion.

2. To accomplish the first purpose, we should always direct our principal operation against the main body of the enemy army or at least against an important portion of his forces. For only after defeating these can we pursue the other two objects successfully.

3. In order to seize the enemy's material forces we should direct our operations against the places where most of these resources are concentrated: principal cities, storehouses, and large fortresses. On the way to these objectives we shall encounter the enemy's main force or at least a considerable part of it.

4. Public opinion is won through great victories and the occupation of the enemy's capital.

5. The first and most important rule to observe in order to accomplish these purposes, is to use our entire forces with the utmost energy. Any moderation shown would leave us short of our aim. Even with everything in our favor, we should be unwise not to make the greatest effort in order to make the result perfectly certain. For such effort can never produce negative results. Suppose the country suffers greatly from this, no lasting disadvantage will arise; for the greater the effort, the sooner the suffering will cease.

The moral impression created by these actions is of infinite importance. They make everyone confident of success, which is the best means for suddenly raising the nation's morale.

6. The second rule is to concentrate our power as much as possible against that section where the chief blows are to be delivered and to incur disadvantages elsewhere, so that our chances of success may increase at the decisive point. This will compensate for all other disadvantages.

7. The third rule is never to waste time. Unless important advantages are to be gained from hesitation, it is necessary to set to work at once. By this speed a hundred enemy measures are nipped in the bud, and public opinion is won most rapidly.

Surprise plays a much greater role in strategy than in tactics. It is the most important element of victory. Napoleon, Frederick II, Gustavus Adolphus, Caesar, Hannibal, and Alexander owe the brightest rays of their fame to their swiftness.

8. Finally, the fourth rule is to follow up our successes with the utmost energy. Only pursuit of the beaten enemy gives the fruits of victory.

9. The first of these rules serves as a basis for the other three. If we have observed it, we can be as daring as possible with the last three, and yet not risk our all. For it provides us with the means of constantly creating new forces in our rear, and with fresh forces any misfortune can be remedied.

Therein lies the caution which deserves to be called wise, and not in taking each step forward with timidity.

10. Small states cannot wage wars of conquest in our times. But in defensive warfare even the means of small states are infinitely great. I am, therefore, firmly convinced that if we spare no effort to reappear again and again with new masses of troops, if we use all possible means of preparation and keep our forces concentrated at the main point, and if we, thus prepared, pursue a great aim with determination and energy, we have done all that can be done on a large scale for the strategic direction of the war. And unless we are very unfortunate in battle we are bound to be victorious to the same extent that our opponent lags behind in effort and energy.

11. In observing these principles little depends on the form in which the operations are carried out. I shall try, nevertheless, to make clear in a few words the most important aspects of this question.

In tactics we always seek to envelop that part of the enemy against which we direct our main attack. We do this partly because our forces are more effective in a concentric than in a parallel attack, and further because we can only thus cut off the enemy from his line of retreat.

But if we apply this to the whole theater of war (and consequently to the enemy's lines of communication), the individual columns and armies, which are to envelop the enemy, are in most cases too far away from each other to participate in one and the same engagement. The opponent will find himself in the middle and will be able to turn against the corps one by one and defeat them all with a single army. Frederick II's campaigns may serve as examples, especially those of 1757 and 1758.

The individual engagement, therefore, remains the principal decisive event. Consequently, if we attack concentrically without having decisive superiority, we shall lose in battle all the advantages, which we expected from our enveloping attack on the enemy. For an attack on the lines of communication takes effect only very slowly, while victory on the field of battle bears fruit immediately.

In strategy, therefore, the side that is surrounded by the enemy is better off than the side which surrounds its opponent, especially with equal or even weaker forces.

Colonel Jomini was right in this, and if Mr. von Bülow has demonstrated the opposite with so much semblance of truth, it is only because he attributed too great an importance to the interruption of provisions and carelessly and completely denied the inevitable success of battle.

To cut the enemy's line of retreat, however, strategic envelopment or a turning movement is very effective. But we can achieve this, if necessary, through tactical envelopment. A strategic move is, therefore, advisable only if we are so superior (physically and morally) that we shall be strong enough at the principal point to dispense with the detached corps.

The Emperor Napoleon never engaged in strategic envelopment, although he was often, indeed almost always, both physically and morally superior.

Frederick II used it only once, in 1757, in his invasion of Bohemia. To be sure, the result was that the Austrians could not give battle until Prague, and what good was the conquest of Bohemia as far as Prague without a decisive victory? The battle of Kolin forced him to give up all this territory again, which proves that battles decide everything. At the same time he was obviously in danger at Prague of being attacked by the whole Austrian force, before Schwerin arrived. He would not have run this risk had he passed through Saxony with all his forces. In that case the first battle would have been fought perhaps near Budin, on the Eger, and it would have been as decisive as that of Prague. The dislocation of the Prussian army during the winter in Silesia and Saxony undoubtedly caused this concentric maneuver. It is important to notice that circumstances of this kind are generally more influential than the advantages to be gained by the form of attack. For facility of operations increases their speed, and the friction inherent in the tremendous war-machine of an armed power is so great in itself that it should not be increased unnecessarily.

12. Moreover, the principle of concentrating our forces as much as possible on the main point diverts us from the idea of strategic envelopment and the deployment of our forces follows automatically. I was right, therefore, in saying that the form of this deployment is of little consequence. There is, however, one case in which a strategic move against the enemy's flank will lead to great successes similar to those of a battle: if in a poor country the enemy has accumulated with great effort stores of supplies, on whose preservation his operations absolutely depend. In this case it may be advisable not to march our main forces against those of the enemy, but to attack his base of supply. For this, however, two conditions are essential:

- (a) The enemy must be so far from his base that our threat will force him into a considerable retreat, and
- (b) We must be able to obstruct his advance in the direction followed by his principal force with only a few troops (thanks to natural and artificial obstacles), so that he cannot make conquests somewhere else which will compensate for the loss of his base.

13. The provisioning of troops is a necessary condition of warfare and thus has great influence on the operations, especially since it permits only a limited concentration of troops and since it helps to determine

14. The provisioning of troops is carried on, if a region possibly permits it, through requisitions at the expense of the region.

In the modern method of war armies take up considerably more territory than before. The creation of distinct, independent corps has made this possible, without putting ourselves at a disadvantage before an adversary who follows the old method of concentration at a single point (with from 70,000 to 100,000 men). For an independent corps, organized as they now are, can withstand for some time an enemy two or three times its superior. Then the others will arrive and, even if the first corps has already been beaten, it has not fought in vain, as we have had occasion to remark.

Today, therefore, the divisions and corps move into battle independently, marching side by side or behind each other and only close enough to take part in the same battle, if they belong to the same army.

This makes possible immediate provisioning without storehouses. The very organization of the corps with their General Staff and their Commissariat facilitates this.

5. If there are no MORE decisive motives (as for example the location of the enemy's main army), we choose the most fertile provinces for our operations; for facility of provisioning increases the speed of our actions. Only the situation of the enemy's main force which we are seeking out, only the location of his capital and the place of arms which we wish to conquer are more important than provisioning. All other considerations, such as the advantageous disposition of our forces, of which we have already spoken, are as a rule much less important.

16. In spite of these new methods of provisioning, it is quite impossible to do without any depots whatever. Therefore, even when the resources of the region are quite sufficient, a wise military leader does not fail to establish depots in his rear for unexpected emergencies and in order to be able to concentrate his forces at certain points. This precaution is of the sort which are not taken at the expense of the final goal.

2. Defensive

1. Politically speaking defensive war is a war which we wage for our independence. Strategically it is the kind of campaign in which we limit ourselves to fighting the enemy in a theater of war which we have prepared for this purpose. Whether the battles which we wage in this theater of war are offensive or defensive, makes no difference.

2. We adopt a strategic defensive mainly when the enemy is superior. Fortresses and entrenched camps, which constitute the chief preparations for a theater of war, afford, of course, great advantages, to which may be added the knowledge of the terrain and the possession of good maps. A smaller army, or an army which is based on a smaller state and more limited resources, will be better able to withstand the enemy WITH these advantages than without them.

In addition there are the following two reasons which can lead us to choose a defensive war.

First, when the regions surrounding the theater of war render operations extremely difficult because of lack of provisions. In this case we avoid a disadvantage which the enemy is forced to undergo. This is the case now (1812) with the Russian army.

Second, when the enemy is superior in warfare. In a theater of war which we have prepared, which we know, and in which all minor conditions are in our favor, war is easier to conduct, and we commit fewer mistakes. When lack of trust in our troops and generals forces us to wage defensive war, we often like to combine tactical with strategic defensive. In that case we fight battles in prepared positions because we are thus again exposed to fewer mistakes.

3. In defensive just as in offensive warfare, it is necessary to pursue a great aim: the destruction of the enemy army, either by battle or by rendering its subsistence extremely difficult. Thus we shall disorganize it and force it into a retreat, during which it will necessarily suffer great losses. Wellington's campaign in 1810 and 1811 is a good example.

Defensive warfare, therefore, does not consist of waiting idly for things to happen. We must wait only if it brings us visible and decisive advantages. That calm before the storm, when the aggressor is gathering new forces for a great blow, is most dangerous for the defender.

If the Austrians after the battle of Aspern had increased their forces threefold, as they might have and as the Emperor Napoleon did, then and only then would they have made good use of the lull which lasted until the battle of Wagram. This they did not do, and consequently the time was lost. It would have been wiser to profit from Napoleon's disadvantageous position, and to gather the fruits of the battle of Aspern.

4. The purpose of fortifications is to keep a considerable part of the enemy's army occupied as siege troops, to give us an opportunity to defeat the rest of his army. Consequently, it is best to fight our battles behind our fortifications and not in front of them. But we must not stand by idly, while they are being conquered, as Bennigsen did during the siege of Danzig.

5. Large rivers, across which it is difficult to throw a bridge (such as the Danube below Vienna and the Lower Rhine), offer a natural line of defense. But we should not distribute our forces evenly along the river bank in order to prevent any crossing whatsoever. That would be most dangerous. On the contrary, we should watch the river and fall upon the enemy from all sides the minute he crosses, while he has not yet reassembled his forces and is still restricted to a narrow space on the river bank. The battle of Aspern offers a good illustration. At Wagram the Austrians had yielded to the French too much territory without the slightest necessity, so that the disadvantages inherent in a river crossing had disappeared.

6. Mountains are the second obstacle which offers a good line of defense. There are two ways of using them. The first is to leave them in front of us, occupying them only with light troops and considering them, so to speak, a river which the enemy will have to cross. As soon as his separated columns emerge from the passes, we fall upon one of them with all our force. The second is to occupy the mountains ourselves. In that case we must defend each pass with just a small corps and keep an important part of the army (1/3-1/2) in reserve, in order to attack with superior forces one of the enemy columns that succeed in breaking through. We must not divide up this large reserve to prevent completely the penetration of any enemy columns, but must plan from the outset to fall only upon those columns which we suppose to be the strongest. If we thus defeat an important part of the attacking army, any other columns which have succeeded in breaking through will withdraw of their own accord.

In the midst of most mountain formations we find more or less elevated plains (plateaus) whose slopes are cut by ravines serving as means of access. Mountains, therefore, offer the defender a region in which he can move rapidly to the right or left, while the columns of the aggressor remain separated by steep, inaccessible ridges. Only mountains of this kind are well adapted for defensive warfare. If, on the other hand, their whole interior is rough and inaccessible, leaving the defender dispersed and divided, their defense by the bulk of the army is a dangerous undertaking. For under these circumstances all advantages are on the side of the aggressor, who can attack certain points with great superiority, and no pass, no isolated point is so strong that it cannot be taken within a day by superior forces.

7. In regard to mountain warfare in general, we should observe that everything depends on the skill of our subordinate officers and still more on the morale of our soldiers. Here it is not a question of skillful maneuvering, but of warlike spirit and whole-hearted devotion to the cause; for each man is left more or less

to act independently. That is why national militias are especially suited for mountain warfare. While they lack the ability to maneuver, they possess the other qualities to the highest degree.

8. Finally, it should be observed that the strategic defensive, though it is stronger than the offensive, should serve only to win the first important successes. If these are won and peace does not follow immediately, we can gain further successes only through the offensive. For if we remain continually on the defensive, we run the great risk of always waging war at our own expense. This no state can endure indefinitely. If it submits to the blows of its adversary without ever striking back, it will very likely become exhausted and succumb. We must begin, therefore, using the defensive, so as to end more successfully by the offensive.

3. Offensive

1. The strategic offensive pursues the aim of the war directly, aiming straight at the destruction of the enemy's forces, while the strategic defensive seeks to reach this purpose indirectly. The principles of the offensive are therefore already contained in the "General Principles" of strategy. Only two points need be mentioned more fully.

2. The first is constant replacement of troops and arms. This is easier for the defender, because of the proximity of his sources of supply. The aggressor, although he controls in most cases a larger state, must usually gather his forces from a distance and therefore with great difficulty. Lest he find himself short of effectives, he must organize the recruiting of troops and the transport of arms a long time before they are needed. The roads of our lines of operation must be covered constantly with transports of soldiers and supplies. We must establish military stations along these roads to hasten this rapid transport.

3. Even under the most favorable circumstances and with greatest moral and physical superiority, the aggressor should foresee a possibility of great disaster. He therefore must organize on his lines of operation strong points to which he can retreat with a defeated army. Such are fortresses with fortified camps or simply fortified camps.

Large rivers offer the best means of halting the pursuing enemy for a while. We must therefore secure our crossing by means of bridgeheads, surrounded by a number of strong redoubts.

We must leave behind us a number of troops for the occupation of these strong points as well as the occupation of the most important cities and fortresses. Their number depends on how much we have to be afraid of invasions or of the attitude of the inhabitants. These troops, together with reinforcements, form new corps, which, in case of success, follow the advancing army, but in case of misfortune, occupy the fortified points in order to secure our retreat.

Napoleon always took great care with these measures for the protection of the rear of his army, and therefore, in his most audacious operations, risked less than was usually apparent.

IV. APPLICATION OF THESE PRINCIPLES IN TIME OF WAR

The principles of the art of war are in themselves extremely simple and quite within the reach of sound common sense. Even though they require more special knowledge in tactics than in strategy, this knowledge

is of such small scope, that it does not compare with any other subject in extent and variety. Extensive knowledge and deep learning are by no means necessary, nor are extraordinary intellectual faculties. If, in addition to experienced judgment, a special mental quality is required, it would be, after all that has been said cunning or shrewdness. For a long time the contrary has been maintained, either because of false veneration for the subject or because of the vanity of the authors who have written about it. Unprejudiced reflection should convince us of this, and experience only makes this conviction stronger. As recently as the Revolutionary War we find many men who proved themselves able military leaders, yes, even military leaders of the first order, without having had any military education. In the case of Condé, Wallenstein, Suvorov, and a multitude of others it is very doubtful whether or not they had the advantage of such education.

The conduct of war itself is without doubt very difficult. But the difficulty is not that erudition and great genius are necessary to understand the basic principles of warfare. These principles are within the reach of any well-organized mind, which is unprejudiced and not entirely unfamiliar with the subject. Even the application of these principles on maps or on paper presents no difficulty, and to have devised a good plan of operations is no great masterpiece. The great difficulty is this:

TO REMAIN FAITHFUL THROUGHOUT TO THE PRINCIPLES WE HAVE LAID DOWN FOR OURSELVES.

To call attention to this difficulty is the purpose of these closing remarks, and to give Your Royal Highness a clear idea of it I consider the most important object of this essay.

The conduct of war resembles the workings of an intricate machine with tremendous friction, so that combinations which are easily planned on paper can be executed only with great effort.

The free will and the mind of the military commander, therefore, find themselves constantly hampered, and one needs a remarkable strength of mind and soul to overcome this resistance. Many good ideas have perished because of this friction, and we must carry out more simply and moderately what under a more complicated form would have given greater results.

It may be impossible to enumerate exhaustively the causes of this friction; but the main ones are as follows:

1. Generally we are not nearly as well acquainted with the position and measures of the enemy as we assume in our plan of operations. The minute we begin carrying out our decision, a thousand doubts arise about the dangers which might develop if we have been seriously mistaken in our plan. A feeling of uneasiness, which often takes hold of a person about to perform something great, will take possession of us, and from this uneasiness to indecision, and from there to half measures are small, scarcely discernible steps.

2. Not only are we uncertain about the strength of the enemy, but in addition rumor (i.e., all the news which we obtain from outposts, through spies, or by accident) exaggerates his size. The majority of people are timid by nature, and that is why they constantly exaggerate danger. All influences on the military leader, therefore, combine to give him a false impression of his opponent's strength, and from this arises a new source of indecision.

We cannot take this uncertainty too seriously, and it is important to be prepared for it from the beginning.

After we have thought out everything carefully in advance and have sought and found without prejudice the most plausible plan, we must not be ready to abandon it at the slightest provocation. On the contrary, we must be prepared to submit the reports which reach us to careful criticism, we must compare them with each other, and send out for more. In this way false reports are very often disproved immediately, and the first reports confirmed. In both cases we gain certainty and can make our decision accordingly. Should this certainty be lacking, we must tell ourselves that nothing is accomplished in warfare without daring; that the nature of war certainly does not let us see at all times where we are going; that what is probable will always be probable though at the moment it may not seem so; and finally, that we cannot be readily ruined by a single error, if we have made reasonable preparations.

3. Our uncertainty about the situation at a given moment is not limited to the conditions of the enemy only but of our own army as well. The latter can rarely be kept together to the extent that we are able to survey all its parts at any moment, and if we are inclined to uneasiness, new doubts will arise. We shall want to wait, and a delay of our whole plan will be the inevitable result.

We must, therefore, be confident that the general measures we have adopted will produce the results we expect. Most important in this connection is the trust which we must have in our lieutenants. Consequently, it is important to choose men on whom we can rely and to put aside all other considerations. If we have made appropriate preparations, taking into account all possible misfortunes, so that we shall not be lost immediately if they occur, we must boldly advance into the shadows of uncertainty.

4. If we wage war with all our strength, our subordinate commanders and even our troops (especially if they are not used to warfare) will frequently encounter difficulties which they declare insurmountable. They find the march too long, the fatigue too great, the provisions impossible. If we lend our ear to all these DIFFICULTIES, as Frederick II called them, we shall soon succumb completely, and instead of acting with force and determination, we shall be reduced to weakness and inactivity.

To resist all this we must have faith in our own insight and convictions. At the time this often has the appearance of stubbornness. but in reality it is that strength of mind and character which is called firmness.

5. The results on which we count in warfare are never as precise as is imagined by someone who has not carefully observed a war and become used to it.

Very often we miscalculate the march of a column by several hours, without being able to tell the cause of the delay. Often we encounter obstacles which were impossible to foresee. Often we intend to reach a certain place with our army and fall short of it by several hours. Often a small outpost which we have set up achieves much less than we expected, while an enemy outpost achieves much more. Often the resources of a region do not amount to as much as we expected, etc.

We can triumph over such obstacles only with very great exertion, and to accomplish this the leader must show a severity bordering on cruelty. Only when he knows that everything possible is always being done, can he be sure that these small difficulties will not have a great influence on his operations. Only then can he be sure that he will not fall too far short of the aim which he could have reached.

6. We may be sure that an army will never be in the condition supposed by someone following its operations from an armchair. If he is sympathetic to the army he will imagine it from a third to a half stronger and better than it really is. It is quite natural that the military commander will make the same mistake in planning his first

operations. Consequently, he will see his army melt away as he never thought it would, and his cavalry and artillery become useless. What appeared possible and easy to the observer and to the commander at the opening of a campaign is often difficult and even impossible to carry out. If the military leader is filled with high ambition and if he pursues his aims with audacity and strength of will, he will reach them in spite of all obstacles; while an ordinary person would have found in the condition of his army a sufficient excuse for giving in.

Masséna proved at Genoa and in Portugal the influence of a strong-willed leader over his troops. At Genoa, the limitless exertion to which his strength of will, not to say his harshness, forced people, was crowned with success. In Portugal he at least retreated later than anyone else would have.

Most of the time the enemy army is in the same position. For example, Wallenstein and Gustavus Adolphus at Nuremberg, and Napoleon and Bennigsen after the battle of Eylau. But while we do not see the condition of the enemy, our own is right before our eyes. The latter, therefore, makes a greater impression on ordinary people than the first, since sensuous impressions are stronger for such people than the language of reason.

7. The provisioning of troops, no matter how it is done, whether through storehouses or requisitions, always presents such difficulty that it must have a decisive influence on the choice of operations. It is often contrary to the most effective combination, and forces us to search for provisions when we would like to pursue victory and brilliant success. This is the main cause for the unwieldiness of the whole war machine which keeps the results so far beneath the flight of our great plans.

A general, who with tyrannical authority demands of his troops the most extreme exertions and the greatest privations, and an army which in the course of long wars has become hardened to such sacrifices will have a tremendous advantage over their adversaries and will reach their aim much faster in spite of all obstacles. With equally good plans, what a difference of result!

8. We cannot stress the following too much:

Visual impressions gained during actual combat are more vivid than those gained beforehand by mature reflection. But they give us only the outward appearance of things, which, as we know, rarely corresponds to their essence. We therefore run the risk of sacrificing mature reflection for first impression.

The natural timidity of humans, which sees only one side to everything, makes this first impression incline toward fear and exaggerated caution.

Therefore we must fortify ourselves against this impression and have blind faith in the results of our own earlier reflections, in order to strengthen ourselves against the weakening impressions of the moment.

These difficulties, therefore, demand confidence and firmness of conviction. That is why the study of military history is so important, for it makes us see things as they are and as they function. The principles which we can learn from theoretical instruction are only suited to facilitate this study and to call our attention to the most important elements in the history of war.

Your Royal Highness, therefore, must become acquainted with these principles in order to check them against the history of war, to see whether they are in agreement with it and to discover where they are corrected or even contradicted by the course of events.

In addition, only the study of military history is capable of giving those who have no experience of their own a clear impression of what I have just called the friction of the whole machine.

Of course, we must not be satisfied with its main conclusions, and still less with the reasoning of historians, but we must penetrate as deeply as possible into the details. For the aim of historians rarely is to present the absolute truth. Usually they wish to embellish the deeds of their army or to demonstrate the concordance of events with their imaginary rules. They invent history instead of writing it. We need not study much history for the purpose we propose. The detailed knowledge of a few individual engagements is more useful than the general knowledge of a great many campaigns. It is therefore more useful to read detailed accounts and diaries than regular works of history. An example of such an account, which cannot be surpassed, is the description of the defense of Menin in 1794, in the memoirs of General von Scharnhorst. This narrative, especially the part which tells of the sortie and break through the enemy lines, gives Your Royal Highness an example of how to write military history.

No battle in history has convinced me as much as this one that we must not despair of success in war until the last moment. It proves that the influence of good principles, which never manifests itself as often as we expect, can suddenly reappear, even under the most unfortunate circumstances, and when we have already given up hope of their influence.

A powerful emotion must stimulate the great ability of a military leader, whether it be ambition as in Caesar, hatred of the enemy as in Hannibal, or the pride in a glorious defeat, as in Frederick the Great.

Open your heart to such emotion. Be audacious and cunning in your plans, firm and persevering in their execution, determined to find a glorious end, and fate will crown your youthful brow with a shining glory, which is the ornament of princes, and engrave your image in the hearts of your last descendants.