

THE RULES OF THE GAME OF WAR

Preamble

This Kriegspiel, or war game, brings into play the operations of two armies of equal strength, each seeking, through manœuvre and battle, the destruction of its adversary. Each is at the same time obliged to protect, within the territory it occupies, the resources needed for effective campaigning, and to keep its lines of communication open.

All the tactical and strategic relationships embodied in the game are consistent with the principles laid down in Clausewitz's theory of war, grounded in classical eighteenth-century warfare and further developed during the periods of the French Revolution and Empire. From this historical model are derived all the conceptions here adopted: the nature of tactical units, whether mounted or on foot, their conventionally determined offensive and defensive strengths, the proportion of the various types of units within the army as a whole, and the degree of support each may provide.

1. The Territory and the Object of the Game

The game is played on a map-board marked off into five hundred squares (25 x 20) and divided in half horizontally so as to represent two opposing territories each ten squares in depth. The two regions are asymmetrically disposed, but each contains the following: two arsenal squares, three fort squares, one mountain-pass square, and nine mountain squares. Mountains constitute an absolute barrier to troop movement and completely obstruct fire. Similarly, they block all lines of communication between the armies and their arsenals and communications units.

Before the start of play, each side or army ("North" and "South") may deploy its units as it sees fit within its own territory, one unit per square. This initial deployment must be conceived in ignorance of the adversary's arrangements, so one or both players should plan out the precise disposition of their forces on paper in advance.

The players toss a coin or draw straws for first turn. A turn comprises the movement of up to five freely chosen fighting or non-combatant units and an attack, once these moves have been completed, on an enemy unit within range. There is no obligation to declare such an attack, however, and a player is at liberty to move fewer than five units during a turn — or indeed to move none at all.

The object of each side is the complete destruction of the adversary's military capability. This may be achieved either by the elimination of all enemy fighting units or by the capture of both enemy

arsenals, an arsenal being neutralised the moment it is occupied by an enemy fighting unit.

2. Fighting Units

At the opening of hostilities, each side has fifteen fighting units at its disposal, to wit:

- 9 infantry regiments
- 4 cavalry regiments
- 1 foot-artillery regiment
- 1 mounted-artillery regiment

The rate of advance of units is one square per turn for infantry and foot artillery and two squares per turn for cavalry and mounted artillery. A unit may move in any direction. Units permitted to move two squares at a time may do so straight or diagonally; they may also move straight for one square and diagonally for the second, or vice versa, the only restriction being that they must move through and into unoccupied squares. These rapid units may also, of course, be moved just one square per turn if a player so desires.

Units possess a specific tactical strength according to type of armament, and this strength varies, too, according to whether the unit is in an offensive or a defensive mode. Tactical strength is expressed numerically as a factor determined by a unit's situation.

Thus an infantry regiment has an offensive factor of 4 and a defensive factor of 6. This defensive factor rises to 8 where the unit is in possession of a mountain pass, and to 10 when it is garrisoned in a fort.

A cavalry regiment has an offensive factor of 7 when charging, which is to say when it is in direct contact with a square occupied by the enemy unit it is attacking. Its defensive factor is 5, a value that is unaffected when a cavalry unit occupies a pass or a fort. When not charging, cavalry may serve as attacking infantry, in which event its offensive factor is 4.

A cavalry charge consists of the combination of the offensive force of all four of an army's cavalry regiments, which must be aligned without a break along a series of squares, horizontally, vertically or diagonally, with, in the leading position, one such unit placed in direct contact with an enemy unit. Charging cavalry may not attack any enemy unit, of whatever type, that is ensconced in a mountain pass or garrisoning a fort.

An artillery regiment, whether foot or mounted (since this difference concerns speed only), has an offensive factor of 5. Its

defensive factor is 8, rising to 10 where the unit is in possession of a pass, and to 12 when it is occupying a fort.

The fire of all units (just like a cavalry charge) travels in straight lines only, along vertical, horizontal or diagonal sequences of squares radiating from the square occupied by the attacking unit. The range of artillery, both offensively and defensively, is three squares aligned in any direction. The range of infantry is two squares. The range of a cavalry unit operating defensively (or serving as attacking infantry, that is to say, when not in contact with the square under attack either directly or via the mediation of a friendly cavalry unit) is also two squares. The offensive range of cavalry charging together in a single column may, of course, cover four squares in the case of the rearmost regiment, whose offensive factor is effective as far as the square taken by the leading cavalry unit. But should this leading unit come under immediate counter-attack, it will have at its disposal (apart from its own defensive factor) only two of its supporting units, since the fourth will now be out of range.

3. Tactical Engagement

An attack on an enemy unit consists of the concentration of one's fire — or, in the case of a cavalry attack, the directing of a charge — upon the square which that unit is occupying. An attack is carried out by a certain number of one's own units that have come within range of the enemy unit's position.

First the offensive factors of all units in a position — and within range — to attack the targeted unit are added up. Then the defensive factors of all opposing units in a position — and within range — to fire upon the targeted unit (including that unit itself) are likewise added up. Where total offensive strength, so arrived at, is inferior or equal to total defensive strength, the targeted unit resists. Where total offensive strength is superior by two or more points, the targeted unit is destroyed; this event entails no obligation upon the attacker to occupy the position thus vacated. Where total offensive strength exceeds total defensive strength by just one point, the unit attacked must abandon its position, and this, obligatorily, as the first of the five moves constituting its side's next turn. Moreover, the dislodged unit may not contribute as part of that next turn in any attack: in other words, its offensive factor does not count even if it is within range of an enemy unit now under counter-attack. Lastly, where a unit defeated by one point is unable to vacate its position in this way as the first move of its side's following turn, all surrounding squares being occupied by friendly or hostile units, the defeated unit is ipso facto destroyed.

The necessity of paying maximum attention to the tactical defence of every single unit is imposed by the fact that even a slightly

prolonged inferiority in tactical encounter leads to a unilateral attrition of numerical strength. Any such quantitative loss, which is in any case ominous from a strategic standpoint, may moreover quickly turn, on the tactical plane, as soon as an army's total offensive strength sinks so low as to preclude all counter-attack, into an irreversible qualitative inferiority on the battlefield.

4. Communications

All a fighting unit's offensive and defensive value, and all its mobility, are entirely dependent on the necessity for that unit to remain in communication with one or another of its army's arsenals. Such communication includes the transmission of information and orders as well as the provision of supplies and munitions; it represents the organic integrity of an army. An arsenal may serve its own side only — it cannot be conquered and used by the adversary; it may, however, be destroyed so as to deprive the enemy of its use.

A unit can neither move nor engage in combat unless it remains on a square which is in communication, either direct or indirect, with one of its own arsenals.

Direct communication means first of all that an arsenal can maintain contact with its side's forces along any vertical, horizontal or diagonal straight line radiating out from its own square; such lines may be of any length, save where mountains interrupt them. Note, for example, that all forts are positioned on an alignment of squares that puts them in permanent communication with one of their own arsenals. In addition, a line of communication may be reorientated, from any square along its trajectory, by a communications unit; such a unit is in effect a forward mobile echelon of the arsenal capable of redirecting communications for an unlimited distance along any straight line radiating out from whichever square it currently occupies. A second such unit placed on any square linked in this way to an arsenal by the first unit may further relay communications in precisely the same way from its own square.

At the start of play each side possesses one foot-communications unit capable of advancing one square at a time and one mounted-communications unit capable of moving two squares at a time. These non-fighting units have no offensive factor; their defensive factor is 1 and their range is two squares. They constitute a rich target in themselves for the adversary, so they need, if isolated, to be kept out of enemy range, and otherwise to be protected by an adequate number of fighting units. Communications units are the only units capable of movement while out of touch with an arsenal; during all such movements, however, they have no ability to redirect lines of communication.

Indirect communication means that each fighting unit remains in communication with any other fighting units of its own army which are in contact with it, that is to say, which occupy any of the eight immediately adjacent squares. Communication extends in this fashion to all units of the same army that are in physical contact with each other. Thus for an army or a detached force each unit of which is contiguous with at least one other, it is necessary and sufficient that just one unit be in direct communication with an arsenal or a relaying communications unit.

A fighting unit may move into a square where it is no longer in communication, directly or indirectly, with an arsenal. Once there, however, and so long as no communication is re-established either through contact with a friendly unit itself in direct or indirect touch with an arsenal, or else by virtue of the movement of a communications unit that reopens communication for it, the isolated unit is condemned to immobility and stripped of all offensive and defensive capacity. It is defenceless against attack and may be destroyed at will by any enemy unit stationed (or brought) within firing range. Note, however, that any friendly unit whose own communications are intact and which is within range to provide supporting fire thereby contributes its defensive factor to the defence of an isolated unit.

A line of communication is severed as soon as an enemy unit occupies any one of its component squares, and remains cut so long as that enemy unit maintains that position.

Where a line of communication is thus broken by an intervening enemy unit, it may be restored either directly or indirectly. Direct communication is re-established if the enemy unit is removed from the square it has occupied, whether of the enemy's own choice or because of the unit's destruction; it is also restored when the movement of friendly communications units manages to reinstitute contact via a new line of squares unoccupied by the enemy. Indirect communication is restored when friendly units whose movements are still unimpeded manage to link up with the unit or units whose communications have been cut by occupying any immediately adjacent square.

When one side has so well manœuvred as to have cut off all or part of the enemy forces, at the end of its turn it may attack and destroy any one of the surrounded units that are within its range, and no resistance can be offered. Resistance cannot be resumed by the surviving units until such time as their communications have been restored. Where a detached force is surrounded by an enemy that has severed all its available lines of communication, it has but one avenue of hope: an attempt may be made as a last resort to liberate the surrounded force before it is completely destroyed by means of a relief

force made up of friendly troops which have been able elsewhere to maintain or restore their communications; these rescuing troops must seek to penetrate the enemy front and so join up with the surviving units of the surrounded force.

In view of the vital importance of communication, strategy in this game is more often concerned with movement against the adversary's communications than with either offensive action directed against first one and then the other enemy arsenal, or with the wearing down of enemy strength by means of enduring superiority on the battlefield.

This emphasis also affects tactics, for the order of battle adopted at each moment must take into account not only the best positioning for the purposes of defence and counter-attack but also the best means of covering one's lines of communication. It is quite possible, even before the initial numerical balance of forces is upset, for an army to find itself on an unequal footing with its adversary because of a threat to its communications. An army whose battle lines become indistinguishable from its lines of communication will quickly lose its tactical manoeuvrability in engagements with the enemy, and may well find itself partly or completely surrounded. The destruction of a single unit can mean broken communications for a portion of an army, and this portion will be lost unless contact can be restored. Thus the outcome of a tactical engagement over just one square may have major strategical consequences.

While it is true that possession of only one of its two arsenals is a necessary and sufficient condition for an army to fight and win, it is nevertheless desirable that both arsenals be preserved for as long as possible, because on occasion this allows for a shift in the operational orientation of the entire force, and because it may help co-ordinate the movements of forces operating from different bases.

5. Sundry Conventions

The elimination of an arsenal is treated like an attack. Hence, when one side occupies an enemy arsenal as one of the five moves of its turn, that turn may not include the declaration of an attack on any other square. An arsenal may be eliminated solely by virtue of its occupation, and it may be occupied only if it is no longer held by an enemy unit. When an arsenal is held by an enemy unit, therefore, that unit must first be destroyed; only at the next turn may the arsenal thus vacated be invested.

Communications units, having no offensive strength, cannot eliminate an arsenal by occupying it. Similarly, unlike fighting units,

communications units do not block enemy lines of communication even when they are placed on squares along those lines.

A cavalry unit occupying a fort cannot attack by charging so long as it remains there. Cavalry in possession of a mountain pass, however, may charge directly from that position.

Arsenal squares are treated exactly like all other squares in the plain, and they place no obligations or constraints upon the tactical employment of units.

A fort, regardless of ownership at the start of play, serves whichever side is in possession of it: as soon as an enemy unit seizes a fort, the advantage it affords in tactical defence passes entirely into the hands of the new occupant. Unlike arsenals, forts are never destroyed, and they may change hands several times in the course of hostilities.

The territory the greater part of whose mountains are perpendicular to the frontier is called “the North”. The territory the greater part of whose mountains are horizontal to the frontier is called “the South”.

Should both sides, by reason of extensive reciprocal attrition, or for whatever reason, simultaneously abandon all offensive movement, they may agree without further ado to declare the game drawn.

6. The Conduct of War

This war game — like war itself and like all forms of strategic thought and action — tends to demand the simultaneous consideration of contradictory requirements.

Each side, in so far as it has managed to preserve its freedom of manoeuvre, is obliged to choose between operations for the undertaking of which the means available are bound to be wanting, in some respect or another, in terms of space and time.

In spatial terms, neither side, so long as the initial balance of forces has not been upset, ever has enough troops either to protect itself at every point where protection is called for, or to attack and nourish its offensives wherever it might wish, or even to respond adequately where the enemy has forced its hand. In terms of time, an army’s movements are never as rapid as one would wish: less than a third of the forces available at the outset may be moved in one turn (a consideration corresponding to the “friction” that slows down all movement in real warfare: the time for orders to be transmitted, the inevitable delays in their execution, etc.). A choice must often be made between an early arrival with few troops, or a later one with more, at

the place where an engagement will occur. Urgent necessities such as the moving up of reinforcements or the repositioning of communications units are imposed for tactical reasons as soon as an engagement is initiated, for, though the maximum number of units must be thrown into battle, at the same time these units have to be guaranteed the best possible support against the enemy's next move, while units left isolated following earlier enemy action may need to be pulled back.

Each army must strive to keep the initiative, compensating for shortfalls in troop strength by the speed with which it can concentrate its forces at a decisive point where it must be the stronger: strategic manoeuvres succeed only when victory yields an immediate return, so to speak, in terms of tactical confrontation. Defensive play is stronger per se, both tactically and strategically, but only offensive — or at least counter-offensive — moves can achieve positive successes.

Forces on the defensive cannot remain static, save temporarily on some highly local position. Rather, they must develop the means of counter-attack. Offensive operations, as they evolve, always tend towards a climactic point, as when superior forces are encountered which compel reversion to the defensive, or when an enemy counter-movement begins to threaten a line of communication stretched thin. Such a counter-movement may itself be countered, either by direct defensive action on the part of friendly units barring access to the vulnerable line of communication or by an indirect defence threatening the flank of the counter-attacking forces. The limits to such combinations are set by lack of the forces and the time required to execute specific movements.

It is naturally highly desirable to extend one's front and threaten the enemy's flanks and rear, yet at the same time the concentration of troops for battle is of the utmost necessity. The enemy's defeat in a major battle is the most direct route to victory in the whole campaign, because the likely upshot is that the enemy will lose its entire army or at least be put at an irreversible numerical disadvantage. When a concentrated army interposes itself between two separated enemy forces, the likely outcome is that one of those forces will be destroyed without the other being able to come to its aid; and an army that is still unified but overextended along a narrow line is liable to breakthrough, which leads to the same prospect.

It makes sense to move against the enemy's communications, but one's own will be stretched in the process, and their protection must also be considered. If such a movement is entrusted to a detached force it must possess enough offensive and defensive strength to oblige the enemy to commit a substantial portion of its forces to engaging it. But over-reinforcement of such a detached force will dangerously diminish the capacity for tactical resistance of the

main body, which is the pivot of manoeuvre. Since any detached force should exist as such for the shortest time possible, and since as a strategic threat speed is its most effective asset, it will normally be made up of mounted units. Such rapid units, however, are also the shock troops which the main body of an army cannot completely do without in battle (assuming that the enemy's are still intact). Mounted troops, moreover, though strong in attack, are weak in defence if engaged by the enemy and cornered without benefit of infantry support; sending infantry along with them, however, will slow them down. This problem is aggravated by the fact that the armies in the field are both very small — as small, in fact, as is compatible with the flexibility needed by fighting forces for manoeuvre and battle. It is this small size of the armies, dwarfed by a vast territory, which justifies the use of the detached forces that in such circumstances can achieve decisive successes. The risks are great, however, for neither army can engage in battle under favourable conditions if it cannot count on the combined support of its three arms.

Similarly, when two completely grouped armies are engaged in tactical confrontation, it is advantageous to manoeuvre on one of an enemy's flanks in order either to close on their line of communication or to bring concentrated fire to bear on one wing of their forces by means of an enveloping movement. Unfortunately, this may also serve as a cue for the enemy to effect the very same movement on the other wing, for flanking movements inevitably expose one's own opposite flank: the flanker will be flanked.

That portion of an army which, after being bettered in a local engagement, finds itself too weak — or on the point of becoming too weak — to launch further counter-attacks, will retreat with a view to concentrating its forces; or else it may withdraw in the direction of reinforcements, or towards a stronger position — crossing a pass, for example, or seeking the protection of a fort. The victorious army, meanwhile, will pursue the defeated portion of the enemy forces so as to maximise the losses that it is bound to continue inflicting upon them until they recover. Still, the victors can move only five units per turn, so that pursuing forces that remain in contact or within range of the retreating army must beware of prolonging engagement beyond the culminating point after which they will be at risk of counter-attack from an enemy that has now regained superiority in terms of concentration and seeks to regain the initiative at the earliest possible moment. There is thus a correct moment for abandoning the tactical exploitation of a successful engagement and proceeding immediately to its strategic exploitation — to operations, say, against enemy arsenals or lines of communication, taking advantage of the situation that has been created by the opponent's retreat and new numerical inferiority (since enemy losses have necessarily exceeded one's own ever since the tide of battle turned against the adversary).

In this war game, the number of obviously ill-advised dispositions of forces and manœuvres is very great; yet even among moves that may be considered well chosen, none, so long at least as a reasonable balance of forces and positions still exists, is assured of success. Success or failure will depend in every case on the action (or inaction) of the adversary. Some measure of carelessness is bound to be a factor on either side, while the most elaborate plans remain largely subordinate to the changes wrought by a succession of unpredictable responses from the opponent, and by the reactions they in turn evoke, all more or less finely judged — and, most importantly, all more or less successfully executed. The interaction between tactics and strategy is a continual source of surprises and reverses — and this often right up until the last moment. Though the basic principles are certain, their application is always a matter of doubt.

This is a war of movement, albeit one arrested at times on a static front, as in the case of the defence of a mountain pass or fort. A war in which territory per se is of no interest: the sole concern is with the tactical or strategic positions that are necessary to an army or deleterious to its adversary. On occasion victory may be achieved without a major battle, even almost without skirmishes, on the basis of manœuvre alone. Sometimes, too, everything may be decided by a single frontal clash without any manœuvring at all. These extreme cases aside, however, the typical chain of events involves a series of movements, engagements, a major battle, renewed manœuvring, and so on. Within the main battle, manœuvre almost always takes the forms of envelopment, retreat, and actions against enemy communications. It behoves an army not to be too sparing of troops or movement, nor yet to squander them. A player who would keep all will lose all. But players who blithely allow themselves to lose more than their opponent will not be able to contain that opponent.

7. Some Under-Represented or Absent Factors

The reader's grasp of the full possibilities of this Kriegspiel may be enhanced by some mention of its chief limitations.

First of all, any attempt such as the present one to apply the general theory of war in abridged form must imply some voluntary historical limits. Thus we are not concerned here with war as waged in Antiquity, nor with feudal warfare, nor with modern war and the transformations it has undergone since the mid-nineteenth century with the introduction of railways, machine-guns, tanks, motorisation, aviation, rockets and so forth.

Three basic and universal aspects of real warfare are absent or under-represented in the game: regrettably, it is hard to incorporate them into a confrontation that takes place on a flat chequered surface and permits of no intervention by external chance factors. These three

considerations are, first, weather conditions and the alternation of night and day; secondly, the morale and degree of fatigue of troops; and, thirdly, uncertainty with regard to enemy positions and movements.

The Kriegspiel proceeds under temporal conditions that never vary: war pursued under a kind of solstice where climate never takes a hand and night never falls before hostilities are definitively concluded. This is the game's main shortcoming when it is compared with reality, but one that could not be mitigated without a loss of rigour in the schematic representation of the overall agonistic process.

Troop morale and fatigue are taken into account only marginally: they are reflected to a degree in the instant paralysis of fighting strength afflicting all units whose communications are cut (including units garrisoning forts, which here have no stopping power, and serve the purpose of tactical support alone). In this regard, an analogy might more readily be drawn with the armies of the Seven Years' War, so tightly dependent on magazines and convoys, than with those of the French Revolution. The quantitative constraints upon the forces available, their irreplaceability and hence their peculiar preciousness, are other features of this war game that are more akin to the military realities of the former period. Factors of morale are further reflected, perhaps, in the offensive strength embodied in the deep range of charging cavalry; as Ardant du Picq clearly demonstrated, the impact of such action in real combat could not be reckoned by simply multiplying mass by speed. As for the morale of generals, and the mental wear and tear affecting the leadership that has always counted for so much in war, it may be said, in contrast to the aforementioned factors, to be very much in evidence here, and liable considerably to affect play. One is often led to overestimate the consequences of movements initiated by one's adversary, even though they may be feints. There is simply no way of obtaining cast-iron certainty as to what should be done, and this holds true even after crushing numerical superiority has been achieved, for there are circumstances in which a seemingly defeated army may still launch decisive actions against its opponent's communications.

Lastly, it should be pointed out that this game falls far short of being a complete representation of real warfare in that it leaves no room for doubt about the enemy's positions and movements. An adversary's initial order of battle, admittedly, is unknown; but the opponent has a limited number of zones of concentration from which to make reasonable choices, and so it is prudent to follow suit. From the moment hostilities open, exact and certain knowledge of all enemy movements is vouchsafed instantly. To borrow the words of an old French proverb, *L'ost sait ce que fait l'ost* : each army knows what the other army is doing (the cavalry thus has no scouting function: its role is restricted to attack, pursuit and raiding).

With these reservations, we may say that this game accurately portrays all the factors at work in real war, and, more generally, the dialectics of all conflict.