

Defense of Rivers and Streams

If we consider the defense of rivers and major streams, they belong, like mountains, in the category of strategic barriers. But they differ from mountains in two ways; one concerns their relative, the other their absolute, defense.

Like mountains, they reinforce a limited defense; but their peculiar characteristic is that they act like a tool made of a hard and brittle substance: they either stand the heaviest blow undented, or their defensive capacity falls to pieces and then ceases completely. If the river is very wide, and all other conditions are favorable, a crossing may be absolutely impossible. But once the defense is breached at any point, the kind of resistance in depth that would occur in mountains does not take place. The matter is settled in this single act, unless the river happens to flow through mountainous terrain.

The other attribute of rivers in their relation to combat is that they generally permit of more favorable, and in some cases excellent tactical possibilities for a decisive battle; usually better ones than do mountains.

What rivers and mountains have in common is that they are dangerous and alluring objects, which have often led to wrong decisions and into dangerous situations. When we come to a more detailed discussion of river defense, we shall call attention to these implications.

Historical examples of the successful defense of rivers are fairly rare, justifying the view that they are not such formidable barriers as people used to think in the days when systems of absolute defense used every means of reinforcement offered by the terrain. Still, a river is undoubtedly an asset to the engagement as well as to the defense of the country in general.

In order to provide some cohesion and perspective, we shall list the various aspects from which the subject will be examined.

First, and generally, the strategic value provided by the defense of rivers must be distinguished from the influence they exert on the defense of the country without themselves being defended.

The significance of the defense proper may be of three different types:

1. Absolute resistance by the main force
2. A mere show of resistance
3. Limited resistance carried out by subordinate elements such as advance posts, covering lines, detached corps, and so forth.

Finally, we have to distinguish three main degrees, or types, that the form of the defense may take:

- 1 . Direct defense intended to prevent a crossing
2. A more indirect form, in which the river and its valley serve only as components for a more favorable tactical development
3. An absolutely direct defense, which consists of holding an unassailable position on the enemy side of the river.

These three degrees will form the framework of our discussion; and when each has been examined in the light of the first and most important consideration, we shall conclude by taking up the other two considerations. First, then, let us look at the direct defense, which attempts to prevent the enemy army from crossing the river.

This can only apply in the case of major rivers-that is, great bodies of water.

The combination of space, time, and strength that must be considered as the basic elements of this theory of defense makes this a fairly complicated matter. Consequently, it is not easy to find a fixed point of departure. Upon careful thought, one will arrive at the following conclusion.

The intervals at which the units defending the river should be stationed are determined by the time required to build a bridge. One must divide the total length of the defensive line by these intervals in order to find the number of units; then divide this number into the total strength available, to find the strength of each individual unit. By comparing that figure with the number of troops with which the enemy can cross the river by using other means while the bridge is being built, one can gauge the chances of a successful defense. Unless the defense is able to attack any enemy units that get across before the bridge is finished, in really superior strength say two to one-it would be dangerous to assume that the enemy could not force a crossing.

Suppose, for instance, that it will take the enemy twenty-four hours to build his bridge. If he cannot get more than 20,000 men across in that time by using other means, and if the defense can concentrate that number at any point in twelve hours or so, no crossing can be forced; 20,000 men will be there by the time the enemy has ferried across half that number. Allowing for the time that messages will take, one can march twenty miles in twelve hours; 20,000 men would therefore be needed for every forty miles, or 60,000 men for the defense of 120 miles of river front. That would be sufficient for 20,000 men to be sent to any point even if the enemy tried to cross at two points simultaneously, and with twice that number if he did not.

The three governing factors are as follows: (1) the width of the river; (2) the means of crossing it, since both together govern the time it will take to build a bridge and the number of men that can get across while it is being built; (3) the strength of the defending force. The attacker's strength is not relevant at this stage. This theory would lead to the view that there is a point at which a crossing completely ceases to be possible and at which no degree of superior strength can force it.

This is the basic theory of the direct defense of a river-that is to say, a defense intended to prevent the enemy from finishing his bridge and from crossing the river by other means. It does not take into account the effect of any demonstrations that the enemy may employ. We

shall now examine the particular circumstances and the measures required by this type of defense.

If, to start with, one disregards all geographical details, it will be enough to state that the units required, according to this view, must be stationed directly on the river bank, each one in concentrated formation. They must be on the river bank because any position further back adds needlessly to the distances that must be traversed. Since the width of the river covers the position against any serious enemy activity, there is no need to keep it at a distance like a reserve force in an ordinary defensive line. Besides, the roads running parallel to a river are generally more passable than those leading down to it. Finally, there is no doubt that this type of position will make possible better observation of the river than would a mere chain of posts, chiefly because all senior officers will be close at hand. Each unit must be kept concentrated, otherwise our calculations would have to be altered. Anyone who knows how long it takes to assemble a unit will recognize that to have the units already concentrated will assure the greatest effectiveness of the defense. At first sight it may be very tempting to set up a line of posts to stop the enemy crossing by boat; but save at the few points, especially suitable for ferrying, such a disposition would be most unwise. Aside from the danger that the enemy can generally reduce such a post by superior fire power from the opposite bank, it is likely to be a total waste of strength: all that is accomplished by such a post is that the enemy will choose a different point for crossing. Unless, therefore, one is strong enough to treat and defend the river like a moat around a fortress-in which case one needs no additional advice-this defense of the river bank itself will necessarily be unproductive.

In addition to these general principles of disposition, we must take into account, first, the individual characteristics of the river; second, the removal of all means of crossing; and third, the effect of fortresses on the river.

If one considers the river as a defensive line, it must have points of support at each end, such as the ocean or neutral territory, or other factors that will prevent the enemy from crossing above or below the defended sector. Such points of support or other conditions will occur only if the line is extremely long, and it becomes evident that the defense of rivers must extend over considerable distances. It is therefore not a practical proposition (and we need not bother with any other kind) to defend a river by massing a large force on a relatively short stretch of it. By a relatively short stretch of river front, we mean a distance not much greater than the normal extension of a position where there is no river. We maintain that cases of that sort do not occur; any direct defense of a river must always be extended until it amounts to a kind of cordon system. It is, therefore, ill-advised to counter any enemy envelopment by methods that would be natural in a concentrated deployment. Hence, where an envelopment is possible, the direct defense of a river, however promising under other circumstances, is a very risky affair.

As to the river between these limits, obviously not all points are equally suited to a crossing. We can discuss this further in a general way, but we cannot actually categorize the possibilities, since the slightest local variation often outweighs the most massive arguments in books. Such categorization would in any case be entirely useless; one look at the river, combined with information received from the local inhabitants, will provide guidance, and there is no need to resort to books.

In a general sense, we would say that the features that most favor a crossing are roads running down to the river, tributaries flowing into it, large towns located on its banks, and,

above all, its islands. On the other hand, features that tend to be stressed in the literature, such as the greater elevation of one of the river's banks, or a bend in its course at the point of crossing, have seldom proved of great significance. The reason is that the influence exerted by these factors is limited to the narrow concept of an absolute defense of the banks, a matter that rarely, if ever, arises in the case of the largest rivers.

Anything that makes a crossing easier at one point than at another is bound to affect the position, and to modify the general mathematical rule in some respects; but it would not be wise to stray too far from this rule and rely too heavily on the difficulties presented at certain points. The enemy will choose the places least favored by nature if he can be sure that he will be least likely to meet us there.

In any case, one measure that can be recommended is the strongest possible occupation of the river's islands. A serious attack on them is the safest clue to the intended point of crossing.

The units posted on the river bank are expected to move upstream or down as the situation may require. If no existing road runs parallel to the river the improvement of the nearest parallel track, or, alternatively, the construction of short stretches of new roads, can be counted among the most important preparations the defense can make.

The second point under discussion is the removal of the means of crossing. This is not an easy matter on the river proper, and is, at any rate, very time-consuming. On the tributaries, especially those on the enemy's side, it is next to impossible, for they are usually already in the enemy's hands. It is most important, therefore, to seal off the mouth of every tributary with fortifications.

The means of crossing that the enemy brings with him-pontoons, that is-are seldom sufficient for major rivers. Consequently, a great deal will depend on the materials for building boats and rafts that he can find on the river itself and on its tributaries, in the large towns along its banks, and finally in adjacent woods. There have been cases in which all of these circumstances work against him to such an extent as to make a crossing virtually impossible.

Finally, there are the fortresses located on either bank or on the enemy's alone. They not only serve as protection against a crossing in their vicinity, whether up- or downstream, but also as a means of sealing off the tributaries and of storing material that could be used for crossing.

So much for the direct defense of rivers, which presupposes a large body of water. The addition of a deep and narrow gorge, or marshy banks, will, it is true, increase the difficulties of crossing and the effectiveness of the defense; but these can never replace a large body of water, for they do not constitute the major break in terrain which is the first requirement for direct defense.

The question arises as to the part played by such direct defense of a river in the strategic plan of a campaign. One must admit that it can never lead to a decisive victory: partly because its intention is not to permit the enemy to cross, but to crush the first substantial force he has landed; partly because the river itself prevents us from exploiting with an energetic counterattack, any advantages gained.

On the other hand, this type of river defense can often gain considerable time-and time, after all, is what the defender is most likely to need. It takes time to assemble the means of crossing. If several attempts at crossing fail, even more time will have been gained. If the enemy changes his direction because of the river, still other benefits will no doubt fall to the defense. Finally, in all cases where the enemy is not determined on an advance, the river will put a halt to his movements and serve as a permanent protective barrier for the country.

Where two substantial forces are involved, the river is broad, and conditions are favorable, the direct defense of a river can be considered an excellent device, and may yield results which, in recent times, have received too little attention due to failures that were caused by insufficient means. The above-mentioned requirements are, after all, easily met by rivers like the Rhine and the Danube. If one can maintain an effective defense against substantially superior forces over r 20 miles of river front by means of 60,000 men, one may well consider it a noteworthy achievement.

Let us return once more to the phrase "substantially superior forces." In the theory we have outlined, everything depends upon the means of crossing, and nothing on the force that seeks to cross, provided it is not inferior to the defending force. Strange as this may seem, it is nonetheless true. But one must not forget that most or practically all river defenses have no absolute points of support. They can all be turned; and great superiority in numbers will greatly facilitate the turning operation.

One must also remember that such a direct defense, even if it is overwhelmed by the enemy, cannot be equated with a lost battle. Even less can it lead to complete defeat: only part of our troops will have been involved, and the enemy, delayed by his slow passage across the bridge, cannot immediately follow up his victory. For all these reasons, one should not under-rate this method of defense.

What matters in all practical affairs is to find the valid point of view.

Thus, in the defense of a river, it makes a great difference whether we have a correct impression of the whole position: some apparently trivial element may significantly alter the situation. What may have been a sound, effective measure in one case may be a disastrous mistake in another. The difficulty of judging everything correctly and refraining from assuming that one river is like another is perhaps greater in this instance than elsewhere. That is why we must constantly be on guard against the danger of applying the wrong methods or misinterpreting the facts. We must add unequivocally, however, that we consider it beneath our dignity to notice the clamor of those whose vague emotions and still vaguer minds impel them to expect everything from attack and movement, -and whose idea of war is summed up by a galloping hussar waving his sword.

Even where they are actually justified, such ideas and feelings are not always enough (we need only cite the once famous "dictator" Wedel at Zulichau in 1759);¹ but what is worse, most of the time they are inapplicable. They leave the commander in the lurch at the very moment when he is beset by a mass of highly complex problems.

In our opinion, then, as long as one aims no higher than a modest negative, the direct defense of a river with a large number of troops and under the right conditions can bring about good results. But this does not apply to minor units. While 60,000 men along a given stretch of

river front are able to stop 100,000 from crossing, 10,000 along the same stretch will not be able to stop a corps of 10,000-probably not even half that number provided these are willing to run the risk of placing themselves on the same side of the river with a defender so superior in numbers. The point is clear, for the means of crossing are the same in either case.

So far we have said little on the subject of feints, since they rarely play a role in the direct defense of a river. Part of the reason is that such a method of defense does not require the concentration of an army at one point, but gives each unit its own sector to defend, and partly it is because, under the conditions assumed here, the pretense of a crossing is an extremely difficult affair. Where the means for a crossing are themselves scarce-less than the attacker feels he needs to ensure the success of his operation-he can hardly want, or afford, to earmark a considerable part for a feint. In any case, it would diminish by that much the size of the forces he can get across at the real crossing point. The other side gains thereby in time what it might have lost through uncertainty.

The direct defense of a river is suitable as a rule only for the very largest European rivers, and only on the lower half of their course.

The second form of defense is suited to minor rivers and deep valleys frequently even for insignificant ones. It consists in taking up a position farther to the rear. The distance should be such as to make it possible either to catch the enemy army in separated units if it crosses at several points, or, if it crosses at a single point, to catch it close to the stream, where it is confined to a single bridge or road. An army whose rear is up against a river or cramped in a deep valley, which is limited to a single line of retreat, is in a most disadvantageous situation for battle. The defense of all moderate sized rivers and deep valleys consists in exploiting these circumstances.

The deployment of an army in large units close to a river-which we consider best for direct defense-assumes that the enemy cannot cross by surprise and in great strength; otherwise, the risk of being separated and beaten individually would be too great. Thus, if conditions are not sufficiently favorable to the defense of the river, if the enemy can lay his hands on too many means of crossing, if the river has too many islands or even fords, if it is not wide enough, or if our forces are too weak, this method of defense must not be considered. The troops, in order to stay in close touch with one another, must be withdrawn some distance from the river. What remains to be done is to converge as rapidly as possible on the enemy's crossing point and attack him before he holds enough of the river bank to enable him to cross at several other points. In this case, the river or the valley must be watched and lightly defended by a chain of outposts, while the army, divided into several corps, takes up a position at appropriate points some distance from the river-normally a few hours' march away.

The important feature here is the passage through the narrow river valley. What counts is not only the body of water as such, but the passage as a whole. As a rule, a deep, rocky gorge is of greater significance than a river of considerable width. The difficulties presented by the march of a substantial body of troops through a narrow passage are actually much greater than they appear to be at first glance. The time it takes is considerable, and the risk that the enemy will meanwhile seize the surrounding heights is most disquieting. If the leading units get too far ahead, they will meet the enemy too soon and are in danger of being crushed by a superior force; if they remain near the crossing point, they will be in the worst possible position for fighting. Crossing such a divide with the idea of facing the enemy on the other side is therefore

extremely daring or presupposes a great superiority in numbers and self-confidence on the part of the commander.

This sort of defensive line cannot, of course, be extended as far as it would be in the case of the direct defense of a major river: one wants to fight with the total force united, and no matter how difficult the crossing points they cannot be compared to those of a major river. The enemy is therefore in a much better position to turn our line. On the other hand, this will take him away from his real direction (assuming, of course, that it runs approximately at right angles to the divide) and the handicap of a narrowed line of retreat is not overcome all at once, but only by degrees. The defender therefore still retains a few advantages over the even if he does not catch him at the critical stage, but only after his envelopment has given him somewhat greater scope.

When speaking of rivers, we are concerned not only with the body of water, but, almost more to the point, with the deep depressions formed by their valleys. We must, therefore, above all make it clear that we do not mean regular mountain valleys, since in that case everything that has been said about mountain warfare would apply. But there is much open country where even the smallest streams run between high, precipitous banks. Besides, marshy banks and other obstacles to approach belong in this category.

Under such conditions, therefore, the position of a defending army behind a fair-sized river or a deep valley is very advantageous; this type of river defense must be counted among the best strategic devices.

Its weakness, the point on which the defender may easily go wrong, lies in the overextension of his forces. It is only natural, in such a situation, to string out one's forces from one crossing point to the next, and not to know where to stop. But if one cannot fight with the army united, the whole enterprise has failed. A lost engagement, an unavoidable retreat, confusion, and casualties of all kinds may bring the army to the brink of total disaster, even if it does not fight to the last.

It is enough to say that one should not extend one's forces too far, and that, in every case, one must be able to assemble one's troops by the end of the day on which the enemy has crossed. This principle will take the place of all further discussion about time, strength and space, which depend on a variety of local factors.

The battle resulting from such conditions is bound to have one peculiar characteristic: the defender must show the utmost impetuosity. The feints with which the enemy may well have kept him guessing for a time will generally allow him to get to the right place only at the last minute. The special advantages of his situation lie in the difficult position of those enemy troops that are directly opposite him. If additional forces arrive from other crossing points and envelop him, he cannot deal with them in the normal way by sustained counterattacks from the rear. If he did, he would sacrifice the advantages of his position. He must decide the issue before these additional troops begins to press him-in other words; he must attack whatever troops are before him with the utmost speed and vigor, and through their defeat reach a decision for the encounter as a whole.

One must remember that the objective of this type of river defense can never be to resist a vastly superior force, as it might perhaps be in the case of the direct defense of a major river.

Usually one will have to deal with the largest part of the enemy's force and even if this happens under favorable conditions, it is easy to see that the disparity of strength must be reckoned with.

This holds true in the defense of medium-sized rivers and deep valleys where large forces are involved; forces which seek a decisive victory and for whom the effective resistance that can be sustained on the rim of the valley bear no comparison with the drawbacks of a dispersed position. If all that is needed, however, is the reinforcement of a secondary line of defense, which is meant to resist for a time and depends on the arrival of reinforcements, a direct defense of the ridges and even of the river bank would indeed be in order. While one cannot expect the advantages of a mountain position, resistance here can be kept up longer than it would in ordinary country. The one condition under which it can be really risky, or impossible, is where the river winds in hairpin bends, which is just what rivers in deep valleys are apt to do. (Consider the course of the Moselle in Germany.) In such a case, the units holding the salients formed by the bends would almost certainly be lost in the event of a retreat.

A major river obviously offers the same possibilities of defense as we have attributed to rivers of medium size where the bulk of an army is engaged, and under much more favorable conditions. Such a defense will invariably be employed where the defender aims at total victory. Aspern is a case in point.

A completely different case arises when an army occupies a river, a stream, or a deep valley immediately to its front, in order to gain a tactical obstacle to approach, a tactical strengthening of its front. A closer study of this belongs to the realm of tactics, but in terms of its effectiveness, we can only call it pure self-delusion. If the divide is great enough, it will make the position's fronts impregnable, but since it is no more difficult to by-pass than any other, the effect is almost as if the defender had evaded the attacker which was hardly the point of occupying the position in the first place. This type of position, therefore, is of use only where local conditions make the attacker's lines of communication so unfavorable that any departure from the most direct route would involve unacceptable consequences.

In this second form of defense feints constitute a much greater threat. The attacker will find them easier to make, while the defender will still have to concentrate his whole force at the real point of crossing. However, the defender will not be quite so pressed for time, for the advantage will remain with him until the attacking force is fully massed and has taken several crossing points, while enemy feints will never be so effective as they will be with a cordon-defense, where no ground can be yielded at all. When it comes to using the reserve, therefore, the problems are very different. In one case, it is simply a matter of knowing the whereabouts of the main enemy force; in the other, it is the far more difficult problem of guessing which will be the first point to be overrun.

We would add a general comment on the subject of either form of defense of major or minor rivers: if they have been adopted in the hurry and confusion of retreat, without preparation, without taking away the means of crossing, and without familiarity with the terrain, they cannot possibly yield the results described above. Usually nothing of the sort can be expected, and so it will be a grave mistake to spread a force too thin over an extended position.

In any case, since everything is apt to go wrong in war unless it is done with full awareness, firmly and wholeheartedly, the same will hold true of defending a river for fear of meeting the enemy in open battle and in the hope that the width of the river or the depth of the

valley will stop him. Such decisions show a lack of confidence in the situation; they often fill the general and the army with dire forebodings, which usually come true only too quickly. After all, a battle in open country is not like a duel that presupposes equal terms: the defender who is unable to find an advantage by exploiting the special nature of defense, or by using rapid marches, or by familiarity with the terrain and freedom of movement, has little to hope for. Least of all can he look to a river or its valley for salvation.

The third form of defense is by means of a strong position that one holds on the enemy's side of the river. Its effectiveness is based on the risk incurred by the enemy that the river traverses his lines of communication, once he had crossed it, and thus would limit him to one or two bridges. Obviously, this will be the case only with major rivers that run broad and deep; it would not apply to a river with a narrow valley, which usually has many crossing points.

The position must be strongly fortified-practically impregnable. Otherwise we would play into the enemy's hands, and our advantage would be lost. If, however, it is strong enough to deter the enemy from attack, the effect may be to tie him down to the bank. If he were to cross, he would expose his lines of communication-though, of course, he would also threaten the defender's. Here, as in all cases where two armies pass each other by, the crucial question is whose lines of communications are the more secure-in number, position, and other respects. In addition, it depends on which side has more to lose, and is therefore more easily outbid by the other; and finally, whose army retains the greater determination on which it can draw as a last resort. The river contributes nothing, except to increase the danger of any such movement for both sides, because both are confined to bridges. Insofar as one can normally assume the defender's crossing points and his various depots to be better fortified than his opponent's, this is a perfectly feasible form of defense which will suffice where other circumstances do not favor a direct defense. Admittedly, it means that the army is not defended by the river, or the river by the army; but the country is defended by the combination of the two, which is what really matters.

We must allow, however, that this form of defense, in which there is no decisive blow, is like the tension set up in the atmosphere between positive and negative electric currents: it will only be able to stop a blow of minor proportions. It might suffice against a cautious, hesitant general who is not compelled to press on even when he has greatly superior strength; it might also do if the armies were already in a state of balance, with neither of them looking for more than minor advantages. But as a means of coping with superior numbers and a dashing general it is a dangerous course, leading close to disaster.

This method of defense carries such an air of boldness and appears so scientific that one might almost call it elegant; but since elegance easily comes close to fatuousness-which is less excusable in war than in society few examples of this elegant method exist. It can, however, be developed into a special means of support for the first two methods: by holding a bridge and a bridge-head, one can always threaten a crossing oneself.

Apart from the purpose of absolute defense with the main force, each of these three forms of river defense may have a further one: that of feigned defense.

An empty show of resistance can, of course, be used in connection with a number of other measures, and basically with any position that is not simply an overnight camp. But the feigned defense of a great river becomes an effective deception if it involves a number of more

or less complex measures. The effect is usually larger in scale, and lasts longer than in other cases. The act of crossing a river in the face of an enemy is always a serious decision for the attacker. He is apt to consider it at length or postpone it until a more favorable time.

A feigned defense requires that the main force should deploy along the river in approximately the same way as it would in the case of a real defense. However, the intention of a mere feint proves that circumstances are not favorable enough for a real defense. It follows that the positions you take up-which are inevitably more or less extended and scattered-may well give rise to serious losses if the units really get involved in resistance, on however limited a scale. That would actually be a half-measure. Therefore, in a feigned defense everything must be calculated in terms of a real concentration of the army at a point considerably further to the rear-frequently as far as several days' march. One can render only as much resistance as is consistent with that plan.

To explain exactly what we mean, and at the same time show the significance that such a show of resistance can have, we recall the final phase of the campaign of 1813. Bonaparte had returned across the Rhine with 40,000 to 50,000 men. With so small a force it would have been impossible to defend the length of this river between Mannheim and Nijmegen the stretch where, according to the general direction of its forces, the allied army would be most likely to cross. The only practical thing Bonaparte could do was to plan his first real stand on the French part of the Meuse, where his army could expect reinforcements. If he had withdrawn to that line at once, the allies would have followed hard on his heels; the same would have happened before long if he had sent his troops to rest-camps on his own side of the Rhine. No matter how cautious and faint-hearted the allies might have been, they would have sent swarms of Cossacks and other light troops across, and if these had succeeded other units would have followed. In consequence the French had no choice but to prepare to defend the Rhine in earnest. Since it was to be expected that, as soon as the allies really started to cross, nothing would be accomplished by this defense, the whole maneuver has to be considered as a mere show of resistance in which the French, in fact, were risking nothing, since their point of assembly was located on the upper Moselle. Only Macdonald, stationed at Nijmegen with 20,000 men, made the mistake of waiting to be driven out. Because of the late arrival of Wintzingerode's corps, this did not happen until the middle of January, and prevented Macdonald from rejoining Bonaparte before the battle of Brienne. The feigned defense of the Rhine, then, sufficed to bring the allies to a halt and make them decide to postpone the crossing until the arrival of reinforcements-a period of six weeks. These six weeks must have been of incalculable value to Bonaparte. Without the show of resistance on the Rhine, the battle of Leipzig would have led the allies straight to Paris; a battle anywhere east of Paris would have been quite beyond the powers of the French at the time.

A demonstration can also be made with the second form of river defense one that involves a river of medium size. But it will normally be much less effective, because the mere attempts at crossing are easier and therefore the game is given away sooner.

In the third form of river defense, the demonstration would probably be even less effective. It would hardly be of more use than any other temporary position.

Finally, the first two forms of defense are well suited to confer much greater strength and security on a chain of outposts or other defensive line established for some secondary purpose (a cordon), or even on a small observation corps, than these would possess without the

river. In all these cases, we are talking only about relative resistance, which will become much more effective wherever a break in the terrain exists. But we must keep in mind not only the fairly long time gained by resistance during the actual engagement but also the many doubts that accompany the planning of the attack, which in ninety-nine cases out of a hundred will cause it to be cancelled unless there are urgent reasons to proceed.