The Histories, Book XVIII, Chapters 28-32:

In my sixth book I made a promise, still unfulfilled, of taking a fitting opportunity of drawing a comparison between the arms of the Romans and Macedonians, and their respective system of tactics, and pointing out how they differ for better or worse from each other. I will now endeavor by a reference to actual facts to fulfill that promise. For since in former times the Macedonian tactics proved themselves by experience capable of conquering those of Asia and Greece; while the Roman tactics sufficed to conquer the nations of Africa and all those of Western Europe; and since in our own day there have been numerous opportunities of comparing the men as well as their tactics, it will be, I think, a useful and worthy task to investigate their differences, and discover why it is that the Romans conquer and carry off the palm from their enemies in the operations of war; that we may not put it all down to Fortune, and congratulate them on their good luck, as the thoughtless of mankind do; but, from a knowledge of the true causes, may give their leaders the tribute of praise and admiration which they deserve.

Now as to the battles which the Romans fought with Hannibal and the defeats which they sustained in them, I need say no more. It was not owing to their arms or their tactics, but to the skill and genius of Hannibal that they met with those defeats: and that I made quite clear in my account of the battles themselves. And my contention is supported by two facts. First, by the conclusion of the war: for as soon as the Romans got a general of ability comparable with that of Hannibal, victory was not long in following their banners. Secondly, Hannibal himself, being dissatisfied with the original arms of his men, and having immediately after his first victory furnished his troops with the arms of the Romans, continued to employ them thenceforth to the end. Pyrrhus, again, availed himself not only of the arms, but also of the troops of Italy, placing a maniple of Italians and a company of his own phalanx alternately, in his battles against the Romans. Yet even this did not enable him to win; the battles were somehow or another always indecisive.

It was necessary to speak first on these points, to anticipate any instances which might seem to make against my theory. I will now return to my comparison.

Many considerations may easily convince us that, if only the phalanx has its proper formation and strength, nothing can resist it face to face or withstand its charge. For as a man in close order of battle occupies a space of three feet; and as the length of the sarissae are sixteen cubits according to the original design, which has been reduced in practice to fourteen; and as of these fourteen four must be deducted, to allow for the weight in front; it follows clearly that each hoplite will have ten cubits of his sarissa projecting beyond his body, when he lowers it with both hands, as he advances against the enemy: hence, too, though the men of the second, third, and fourth rank will have their sarissae projecting farther beyond the front rank than the men of the fifth, yet even these last will have two cubits of their sarissae beyond the front rank; if only the phalanx is properly formed and the men close up properly both flank and rear, like the description in Homer:

So buckler pressed on buckler; helm on helm; And man on man; and waving horse-hair plumes In polished head-piece mingled, as they swayed In order: in such serried rank they stood.

[Iliad, 13.131]
Polybius (c.200-after 118 BCE): The Roman Maniple vs. The Macedonian Phalanx

And if my description is true and exact, it is clear that in front of each man of the front rank there will be five sarissae projecting to distances varying by a descending scale of two cubits.

With this point in our minds, it will not be difficult to imagine what the appearance and strength of the whole phalanx is likely to be, when, with lowered sarissae, it advances to the charge sixteen deep. Of these sixteen ranks, all above the fifth are unable to reach with their sarissae far enough to take actual part in the fighting. They, therefore, do not lower them, but hold them with the points inclined upwards over the shoulders of the ranks in front of them, to shield the heads of the whole phalanx; for the sarissae are so closely serried, that they repel missiles which have carried over the front ranks and might fall upon the heads of those in the rear. These rear ranks, however, during an advance, press forward those in front by the weight of their bodies; and thus make the charge very forcible, and at the same time render it impossible for the front ranks to face about.

Such is the arrangement, general and detailed of the phalanx. It remains now to compare with it the peculiarities and distinctive features of the Roman arms and tactics. Now, a Roman soldier in full armor also requires a space of three square feet. But as their method of fighting admits of individual motion for each man---because he defends his body with a shield, which he moves about to any point from which a blow is coming, and because he uses his sword both for cutting and stabbing---it is evident that each man must have a clear space, and an interval of at least three feet both on flank and rear if he is to do his duty with any effect. The result of this will be that each Roman soldier will face two of the front rank of a phalanx, so that he has to encounter and fight against ten spears, which one man cannot find time even to cut away, when once the two lines are engaged, nor force his way through easily---seeing that the Roman front ranks are not supported by the rear ranks, either by way of adding weight to their charge, or vigor to the use of their swords. Therefore, it may readily be understood that, as I said before, it is impossible to confront a charge of the phalanx, so long as it retains its proper formation and strength.

Why is it then that the Romans conquer? And what is it that brings disaster on those who employ the phalanx? Why, just because war is full of uncertainties both as to time and place; whereas there is but one time and one kind of ground in which a phalanx can fully work. If, then, there were anything to compel the enemy to accommodate himself to the time and place of the phalanx, when about to fight a general engagement, it would be but natural to expect that those who employed the phalanx would always carry off the victory. But if the enemy finds it possible, and even easy, to avoid its attack, what becomes of its formidable character? Again, no one denies that for its employment it is indispensable to have a country flat, bare, and without such impediments as ditches, cavities, depressions, steep banks, or beds of rivers: for all such obstacles are sufficient to hinder and dislocate this particular formation. And that it is, I may say, impossible, or at any rate exceedingly rare to find a piece of country of twenty stades, or sometimes of even greater extent, without any such obstacles, every one will also admit. However, let us suppose that such a district has been found. If the enemy decline to come down into it, but traverse the country sacking the towns and territories of the allies, what use will the phalanx be? For if it remains on the ground suited to itself, it will not only fail to benefit its friends, but will be incapable even of preserving itself; for the carriage of provisions will be easily stopped by the enemy, seeing that they are in undisputed possession of the country: while if it quits its proper ground, from the wish to strike a blow, it will be an easy prey to the enemy. Nay, if a general does descend into the plain, and yet does not risk his whole army upon one charge of
the phalanx or upon one chance, but maneuvers for a time to avoid coming to close quarters in the engagement, it is easy to learn what will be the result from what the Romans are now actually doing.

For no speculation is any longer required to test the accuracy of what I am now saying: that can be done by referring to accomplished facts. The Romans do not, then, attempt to extend their front to equal that of a phalanx, and then charge directly upon it with their whole force: but some of their divisions are kept in reserve, while others join battle with the enemy at close quarters. Now, whether the phalanx in its charge drives its opponents from their ground, or is itself driven back, in either case its peculiar order is dislocated; for whether in following the retiring, or flying from the advancing enemy, they quit the rest of their forces: and when this takes place, the enemy's reserves can occupy the space thus left, and the ground which the phalanx had just before been holding, and so no longer charge them face to face, but fall upon them on their flank and rear. If, then, it is easy to take precautions against the opportunities and peculiar advantages of the phalanx, but impossible to do so in the case of its disadvantages, must it not follow that in practice the difference between these two systems is enormous? Of course, those generals who employ the phalanx must march over ground of every description, must pitch camps, occupy points of advantage, besiege, and be besieged, and meet with unexpected appearances of the enemy: for all these are part and parcel of war, and have an important and sometimes decisive influence on the ultimate victory. And in all these cases the Macedonian phalanx is difficult, and sometimes impossible, to handle, because the men cannot act either in squads or separately.

The Roman order on the other hand is flexible: for every Roman, once armed and on the field, is equally well-equipped for every place, time, or appearance of the enemy. He is, moreover, quite ready and needs to make no change, whether he is required to fight in the main body, or in a detachment, or in a single maniple, or even by himself. Therefore, as the individual members of the Roman force are so much more serviceable, their plans are also much more often attended by success than those of others.

I thought it necessary to discuss this subject at some length, because at the actual time of the occurrence many Greeks supposed when the Macedonians were beaten that it was incredible; and many will afterwards be at a loss to account for the inferiority of the phalanx to the Roman system of arming.