Some Thoughts on Morale and Firepower

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One of the issues which perplexes rule writers (and nearly every solo player is a rules writer) is how to balance the physical aspects of weaponry with the morale qualities of the troops. By balance, I don't mean that both factors are equal, only that for the kind of warfare represented that these factors are "realistically" portrayed. The first evidence that the wargamer has perhaps got it wrong is when he fights units to the last man. We don't see too much of this, but I think some wargamers would derive more satisfaction from their gaming if they were confident that the rules used produced results consistent with historical evidence.

In ancient and medieval warfare, two lines would clash and with much physical pushing would inflict casualties on their opponent. This tightly-locked clash might continue for some time until one side broke. Breaking meant that the individual soldiers were incapacitated or withdrew so that at some point the line lost cohesion. A physical rupture or hole would begin to appear. Nearby soldiers, seeing the incipient gap, would more likely than not be overcome with the increasing probability of physical harm to their persons, and would further withdraw, thus enlarging the gap. If the defending commander could do so, he might commit his reserves to reinforce his men still in the gap, thus closing it.

The attackers, seeing the gap, would be encouraged to press the fight even harder, hoping to break completely through the enemy's lines and destroying him in detail. Once the breakthrough appeared, the fight moved quickly to conclusion. Now, very few casualties might be suffered up to this point. But the successful commander then launched fresh reserves, perhaps cavalry, and riding through the rupture, precipitated a rout and rode down the fleeing soldiers, killing and capturing large numbers.

What is interesting to note is that the critical point was reached when some few soldiers occupying a section of the line started withdrawing and their opponents pushed ahead. Physical destruction was useful only insofar as it caused some troops to stop fighting (killed or wounded) and others to start moving rearward. And we can agree that the reason those soldiers fell back was likely because they now feared (more than before) being killed or wounded. We see this dynamic even more clearly in the musket period. Two lines approach one another. Skirmishers start inflicting casualties and suffer little in return. As the two formed lines approach closely enough, they open up a firefight. Soldiers suffer ghastly wounds and their nearby buddies are scared witless, perhaps unable to return fire effectively, perhaps starting to move to the rear. Before much physical destruction is inflicted however, one side fixes bayonets and charges. The reason this is done sooner rather than later is that the commander isn't sure how long he can keep his men under control and get them to charge. Anyway, before the lines close to hand-to-hand melee, typically the defender falls back or the attacker is stopped in his tracks. Again, while many casualties have been inflicted, it is the morale issue which determined the winner. As one unit breaks, soldiers in nearby units, fearing being outflanked themselves, hesitate or start drawing back.

If the overall commander doesn't close the breach with reserves, the outcome can be pretty much predicted – widespread collapse and carnage. We know from studying hundreds of these battles that the largest part of casualties is inflicted during the pursuit, not during the firefight itself.

What we are seeing is that physical destruction (inflicting casualties by the effects of weapons) is useful in causing one side to suffer a morale failure before the other side. It is no secret that it is not always the side that suffered the greatest number of casualties that is the side that withdraws first. It might be interesting to know that historically soldiers have struggled with the issue, particularly as the strength of the offense and defense started to fall out of balance.

The time was the mid-nineteenth century. The advent of rifled muskets and the proliferation of artillery on the battlefield were increasing the power of the defense relative to the offense. Evidence from the Crimean War and the American Civil War suggested that the days of attacking shoulder to shoulder in dense columns was probably coming to an end. The spade became ubiquitous as soldiers grimly dug in and hoped that their opponent would attack frontally. Enter a French officer, Ardant du Picq.

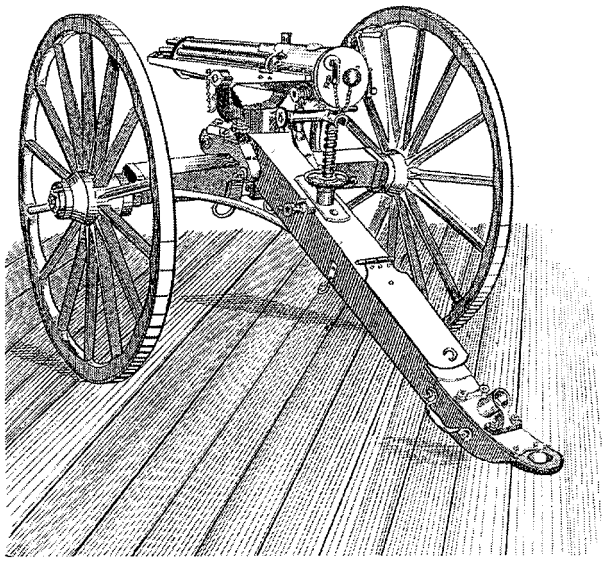
Ardant du Picq was a veteran of the Crimean War and actions in North Africa and the Middle East. He saw that generals by and large treated war like a game of chess, the maneuvering of units to gain some positional advantage. [Sound like wargaming?] Ardant du Picq more fully explored the human dimension. He relied on his own experience, the writings of the Greeks and Romans, and the opinions of other experienced soldiers.

In fact, he used a revolutionary (for the time) method to elicit information; he circulated a questionnaire amongst his fellow officers. He persuaded himself that human psychology more than technology was the key to combat. "It is the mind that wins battles, that will always win them, that always has won them throughout the world's history. ...Mechanics, modern arms, all the artillery invented by man and his science will not make an end of this thing...called the human mind."

Ardant du Picq noted that soldiers, given the opportunity, tended to hold back from the fight rather than pushing the attack to closure. The officers and sergeants kept the men going forward and peer pressure was helpful as well. However, as tactical formations opened up to accommodate the increased range and accuracy of firearms, the ability of the officers to keep the men moving decreased. It was easier for fearful soldiers to stop and crouch behind cover and remain there, not firing at all. Armies were faced with a dilemma. If they kept the troops in tight formations, they could better maintain control and keep the men moving forward in the attack. However, the defender could more easily inflict horrendous casualties on a massed target. The attacker was betting that he could get enough men across the beaten zone before his formation melted away. On the other hand, if the attacker used looser, dispersed formations with men taking cover as necessary, he would suffer fewer casualties but he might never get close enough to cause the enemy to break and withdraw. And without provoking the defender to withdraw, the combat would degenerate into an indecisive firefight. Once the attacking soldiers had gone to ground, it was very difficult to get them moving forward again.

Ardant du Picq noted that with the increase in range, accuracy, and volume of fire, soldiers were forced to absorb more fear in a compressed period of time. Units which had been receiving casualties for awhile might not even move forward when the order to attack was given but would hesitate. This would drain the courage of soldiers who had been, until then, willing to advance. So what did Ardant du Picq see as the solution? He saw that the key was to raise the threshold of courage and to do so, he understood that unit cohesion was the method. Unit cohesion starts with individual self-confidence (built by training and good leadership) and moves to mutual support. Soldiers who value their buddies will not desert them for fear of losing self-respect. Shared experiences, unit pride, concerned leadership all go into the mix that results in cohesive units. This is all well and good but what did it say about conscript armies?

Conscripts thrown together at the declaration of war have little time to build the cohesiveness that Ardant du Picq saw as necessary in face of battlefield conditions that were steadily becoming more dangerous. European armies were based on a hard core of regulars backed up by reserve formations (which were trained but may never have seen combat) and newly raised units. Did there need to be different tactics for each group or could one set of tactical regulations serve all needs?



This debate raged in European military circles from the end of the Franco-Prussian War right up to World War I. At least one country changed from close formations to dispersed formations and then changed back again. While the debate continued, armies saw the advent of smokeless powder, breech-loading weapons, magazine-fed rifles, rapid-fire artillery, barbed wire and the proliferation of reliable machine guns. Everyone saw the same changes in the operational environment but differed over the effects these would have on the actual conduct of the battle.

Some nationalists believed that their citizenry had the requisite innate courage to cross the beaten zone, or that the government could take steps to "harden" the citizenry through compulsory military service in peacetime. Others understood that their units would take horrendous casualties while attacking but the soldiers could be made to understand that this was the necessary price to pay to ensure victory. Some nations devised complex tactical attack formations that included a mix of skirmishers, two-rank lines, and company columns. Others emphasized flanking attacks using concealed routes. Others studied night attacks as a means of minimizing casualties. Artillerists explored the possibilities of supporting the assault itself as well as "preparing the objective" before the attacking troops advanced. Some influential military writers actually persuaded themselves (and many others) that these technical innovations actually favored the attacker!

While some observers saw the Russo-Japanese War and Boer War as instructive, others did not. Most took as their point of departure the Franco-Prussian War in which the attacking German formations were very often successful even though they took higher casualties initially than the defending French. The Germans paid the price closing into contact but the French paid the price when their lines cracked. What the French and British thought that they learned (or re-learned) was that only the tactical offense would lead to decisive victory.

They were not disabused of this questionable notion until the staggering losses of August 1914 were eventually analyzed. And even then, the strategic imperative for victory often drove the Allies to frontal assaults at various times during the remainder of the war. The Germans had little choice, their strategy rested upon an operational offensive which meant non-stop marching and attacking through Belgium and France. Colonel Ardant du Picq knew of none of this for he had died leading his infantry regiment against the Prussians near Metz in 1870. It is said that the book containing his theories, *Battle Studies*, was the second most popular book in the French trenches (*War and Peace* being the most popular).

Now, what might we take away from this brief exposition? Well, it probably reminds us once again of the importance of morale relative to the physical destruction of missile weapons. ["The moral is to the physical as three is to one" – Napoleon.] This means, at least in the musket period, that we should see attackers stopped in their tracks without closing and defenders withdrawing before contact is made. In fact, these two cases are more common than two forces actually making contact.

It also suggests that all units are not equal and that the troops which can hang on the longest are those which are cohesive. Only the most cohesive units should be able to fight themselves down to minimal strength. Most units which suffer severe casualties will hunker down out of harm's way, refusing to move forward, despite frantic orders to the contrary. While cohesion is a factor of training, shared experience, and leadership among others, we can probably just save ourselves time by assigning a cohesion code to the unit prior to combat which takes all factors into account. Then we can cross reference the cohesion code against the number of casualties inflicted each turn to get a result. For a very simple example:

Cohesion factor	Die roll -1	0	1	2	3	4	5	6
7	R	W	H					
6	R	W	H	H				
5	R	W	W	H				
4	R	W	W	H	H			
3	R	R	W	W	H			
2	R	R	W	W	H	H		
1	R	R	R	W	W	H		

H = hold (no forward movement next turn)
W = withdraw (immediate rearward movement, face enemy, no forward move but can fire next turn)
R = rout (immediate rearward movement, face away from enemy, no movement toward enemy next turn)

This is offered as an example only. Here's how it works. I would expect most units to be a cohesion factor 4 or 5. Each turn in which a unit suffers some number of casualties (maybe 3 figures for a 30 figure unit) it must roll for morale. The attacker rolls first. If all attacking units either hold, withdraw, or rout then the defending unit is spared the die roll regardless of casualties. Also, a unit must roll regardless of casualties suffered if a friendly unit at some close distance withdraws or routs. When a unit fell below some designated level (perhaps 2/3 strength) it would be required to roll each turn it suffered any casualties.

What factors might modify the die roll? Well, most factors internal to the unit are taken into account by the cohesion factor. A factor which might improve the result (add to the die roll)

might be immediate presence of higher level leader. Negative factors (subtract from die roll) might be receiving an attack in rear or flank or the unit below 50%. Also, casualties suffered by artillery fire tend to provoke more fear than firearm casualties. As a solo player, feel free to pick your own modifiers. I would caution against too many factors, however. Also, for simplicity sake I start each morale calculation from scratch each turn. That is to say, a result of hold or withdraw has no effect on the following turn. If a unit that withdrew last turn suffers fewer than the designated number of casualties, then it does not need to roll again. Only routing units roll for rallying. A routed unit that has rallied may turn to face the enemy and can fire but not move next turn. The sequencing of penalties and rolling to rally need to be sequenced so that all units receive penalties of equal strength and duration.

The above example is admittedly simplistic and you should feel free to tinker with the numbers to fit well with your other rules. What should happen however, are more historically realistic results: attacks will bog down, units will break and run under varying levels of pressure, some units will perform unexpectedly well or poorly. Small cohesive forces will beat large un-cohesive armies. What will be rare are melees that continue until one unit or the other is destroyed to the last figure. All these results will present even greater challenges for the wargamer but hopefully provide added satisfaction as well.