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Hellenic Armies: An Analysis of the Organization and Tactics from Classical Sparta to  
Alexander the Great

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## ABSTRACT

The purpose of this thesis is to analyze how and why Greek warfare changes from the heyday of Classical Sparta to the dominance of Alexander the Great. The principles of war have and will always remain constant; however, the way in which wars are fought change. The belligerents change, the weapons, armor, technology, goals, and scale all change; but there will always be friction and the unknown. There will always be chaos and death. Greek warfare was a conservative affair until the invasion of the Persian Empire in the Fifth Century BCE. Foreign contact exposed the weaknesses in the Greek mode of war at that time and began the process of rapid change that took place over the course of a little more than a century.

How the Greeks went from heavily armored hoplites to a diverse force of much more lightly armored hoplites, light infantry, skirmishers and cavalry, and finally to the combined arms Macedonian Army created by Phillip II of Macedon and applied by Alexander the Great, is a series of events that centered around adaptation and survival to achieve victory. First the need to survive the Persian threat, then other Greeks, and then to conquer Persia. This thesis will focus on the religious, logistical, and strategic changes made, which encompasses much more than formations and supplies and sacrifices.

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## **Introduction**

Warfare has an unchanging nature and an ever-changing methodology. The basic principles and characteristics of warfare have remained the same since the very first war, and will remain the same for the duration of its existence. There will always be uncertainty and friction and fluidity and all the other things that make the conduct of war what it is, but the science and the art of war will always change. A change in the science will usually prompt a change in the art, or a change in the art will elicit a change in the science of war. The gunpowder revolution is a great example of this. Gunpowder led to the development of firearms, which in turn led to the creation of tactics better suited to using them: standing in ranks and firing en masse until closing with the enemy and commencing hand to hand combat. Over time this tactic changed as firearms improved, artillery was created and improved, and leaders started using their resources differently than they had before. Soldiers of World War One saw what happens when the art of war does not change with science of war. Massed charges across an open field worked when muskets and simple cannons ruled the battlefield, but led only to massacres when against machine guns and long range, shell firing artillery. Tactics continued to change as a result of the evolution of technology through the Second World War (with the driving power being Nazi Germany), the Korean War (with the driving power being United States), and the Vietnam War (with the driving power being United States). Between the Vietnam War and the first Persian Gulf War there were no significant changes in technology, though it did improve. Rather, it was the art of war that changed. The United States fully implemented the doctrine of maneuver warfare and utterly shocked the world with the speed and efficiency used to destroy Iraqi forces.

From Greece's Archaic Age through the Hellenistic Age, Greek warfare advanced, changed and developed in both the art and science of war. Both the art and science of war

influence every aspect of warfare. Logistics and strategy are the two most obvious and heavily influenced by these changes. The art of war, generally being how a leader implements their resources. It is all the subjective, as well as intangible things that take place in war. Science of war, on the other hand, are all the tangible and objective things in war. Strategy is an aspect of the art of war. There is not necessarily a right way to implement an army. But strategy is influenced by the science of war. A spearman cannot be deployed in the same manner as a slinger or a swordsman, nor can a heavily armored hoplite be used in the exact same manner as a Macedonian phalangite who uses the long *sarissa*. Strategy is therefore one of these grey areas. It can be reasonably argued that it is both: consisting of definitely artistic aspects--such as tactics, which is the most zoomed in aspect of strategy (it is how individuals are moved around the battlespace)--and definitely scientific aspects--such as the equipment used. This work will explain how the following things were, and how they changed.

Classical Greek warfare began with the dawn of the hoplite and phalanx at the dawn of the Archaic Period. During this time Greeks began to carry the large convex shield that is inseparable from the hoplite, the *hoplon*. The development of this shield, as well as the increasing amount of armor worn, was a response to the development of the phalanx--here the art influences the science. During this time the Spartans established themselves as the premier warfighting polis in all of Hellas. Because of their skill and professionalism, the Spartans gained a reputation as the ideal hoplite army, and as such, Sparta can be used as the archetype for warfare during what will be termed the Classical Period of Greek warfare for the purposes of this paper. It is not to be confused with the actual Classical Period of Greek history which stretches from the end of the Archaic Age until Alexander the Great. The Greek world was still in its own bubble at this time. Even though they were reaching out across the Mediterranean to Egypt and



Phoenicia and even to Mesopotamia, they were all still, most often, a localised issues: the city-state, and Greek culture--they were divided into city-states, having no concept of a Panhellenic state, but did understand themselves to be Greeks as opposed to barbarians. In terms of the effect on the military development of the Greek world this introverted outlook on the world hindered it. The staple of Greek warfare was the hoplite, the heavy infantry. Even though they wore less armor than their forefathers of the Archaic Age, they were still the definition of heavy infantry. It is clear that light infantry was a part of classical armies; however, it is also clear that they were considered to be rather unimportant. When hoplites fought other hoplites there was no issue with this. Light infantry had no decisive role in battle. But when the Persians invaded it was a problem. The Athenians understood the weakness of hoplites to cavalry and light infantry at Marathon, as did the Spartans at Thermopylae. Encounters with the Persians heavily influenced the thinking of military minds all over the Greek sphere, even in Sparta.

The years after the Persian War saw many changes in the organization and equipment of Greek armies. As Sparta and Athens came to blows in the first stage of the Peloponnesian War the changes were sharply apparent. As the war dragged on numerous other changes emerged: most notably there was a higher integration of other types of arms. The principle of combined arms<sup>1</sup> was overwhelmingly important through the war. The use of light infantry, cavalry, skirmishes, and naval power played key roles in countless battles. The Persian War did not just influence the organization and equipment of hoplite armies. Contact with the Persians greatly broadened the perspectives of the Greeks. They began having an increased amount of foreign

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<sup>1</sup> Combined arms is when a military force uses a diversity of weapon and troop types in order to support each other. This can lead to a combined arms dilemma, which is when the enemy is caught between two or more of the weapon/troop types. A modern example is pinning an enemy behind cover with infantry, then hitting them with artillery behind cover. In order to avoid the artillery they must leave cover, only to be attacked by the infantry.

contact, especially with the Persians and the subject peoples of their empire. Xenophon and the 10,000 are an excellent example of this. The war also gave the Greeks a better idea of what it meant to be Hellenes (Ἕλληνες), rather than foreigners (ξένοι) or barbarians (βάρβαροι). Various *poleis* were able to work together, moving all around the Greek peninsula, in order to expel a foreign threat. This also meant that they were capable of moving all around Greece to fight each other. Conflicts shifted from highly localized, neighboring states fighting each other, to the Spartans and the Athenians and all their allies fighting all the way in the Northwest, or Thrace, or Sicily. This ultimately led to improvements in logistics, which are the methods and manners by which an army--including a fleet--supports itself in the field.<sup>2</sup>

The 4th Century was a complex period of shifting alliances and dominant powers, primarily centered around Sparta, Athens, and Thebes. The struggle decisively came to a turning point when Epaminondas, a Theban general, crushed the Spartan army. He made no changes, improvements or additions to the science of Greek war. He changed the art. He changed things on a tactical level by deploying his hoplites--both Theban and allied--in a new way. Epaminondas ushered in the final form of hoplite warfare, and, indirectly, the final evolution of it, which just a short decade later began to unravel the hoplites by way of Philip II of Macedon. While he was kept as a hostage in Thebes, Philip II was greatly influenced by the things which he learned. Philip II had access to both Epaminondas and the commander of Thebes' Sacred Band, Pelopidas--two of the greatest military minds of Greek history. His experience with the two will be shown to be responsible for the advancements that Philip himself made to Greek warfare.

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<sup>2</sup> The field is any place that is not a base, camp or forward post for an army.

Philip II of Macedon created a professional army for the Macedonian state, which focused heavily on the use of cavalry. Most importantly though, the King of Macedon replaced the hoplite with *sarissa* phalangites.<sup>3</sup> The premise was the same. The main body of infantry would be a tightly packed body of armored spearmen; but Philip greatly lighted the armor worn by his phalangites, replaced the large *hoplon* with a much smaller shield that could be worn around the neck, and replaced the seven-foot spear of a hoplite with a massive sixteen foot long *sarissa*. Philip blended the various elements that hoplite armies had been lacking and were slowly adding: the skirmishes, light infantry, heavy cavalry, light cavalry, siege engines, an engineer corps. Everything that a truly combined arms force needed. With this army Philip II was able to become hegemon of nearly all of Greece. Later his son, Alexander the Great, would take the army to its fullest potential by applying it to its fullest capabilities--earning the renown as history's greatest general.

Greek warfare progressed in a way that is natural. Time marched forward and the technologies and tactics of war along with it. But why did Greek warfare begin to change? And why did it continue to change for that matter? The key is survival. If the way Greek armies fought did not change, they would have been crushed long before Alexander could conquer nearly the entire known world.

Chapter one will focus on the Classical period of Greek warfare up to the end of the Persian War. Chapter two will describe how warfare began to change in the years after the Persian War, focusing on the Peloponnesian War and the Thebes under Epaminondas. Chapter three will finish the changes made to Greek warfare by describing the changes and innovations

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<sup>3</sup> This paper will use the term "phalangite" to refer to the Macedonian *sarissa* armed spearmen who fought in the phalanx. This will be done to draw a clear distinction between hoplites, who are phalangites since they fight in the phalanx, and the spearmen of the Macedonian phalanx.

made during the reigns of Philip II of Macedon and Alexander the Great. All three chapters will analyze the overarching themes of religion, logistics, and strategy. They will not all have equal attention in each era because they do not all change equally or in the same way.

## **Chapter 1: Classical Armies**

### **Religion**

Religious acts were a regular part of everyday life for the ancient Greeks--they were fully intertwined with their everyday business . This was especially true for the Athenians and Spartans. The kings of Sparta were granted two priesthoods: Zeus Lakedaimon and Zeus Ouranos,<sup>4</sup> indicating the kings' role as chief priests. Military campaigns were full of prayers, sacrifices, divinations, and all sorts of divine activity which would all have required the attention of the Spartan king that was leading the army--or the general in cases in which a king was absent. Activity began before the kings even left Sparta, for the kings had the power to declare war, and if any Spartan attempted to stop them the individual was subject to a curse.<sup>5</sup> Curses, in ancient Greece, were rituals accompanied by prayers that beseeched a higher power for retribution or justice. Therefore, the kings were protected by the gods and daimones, and were, in a way, given a divine mandate to declare war. Coupled with the fact that the kings were priests of two of Sparta's principal deities religiously justified them in declaring war. Whenever it was considered necessary, the Pythia<sup>6</sup> would be visited and asked to consult Apollo for wisdom--including whether or not to go to war. The Greeks held the Pythia in such high esteem that

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<sup>4</sup> Herodotus, *The Histories*, 6.56.1-2.

<sup>5</sup> Herodotus, 6.56.4.

<sup>6</sup> The famous Oracle of Delphi

Lykurgus was able to use a prophecy from her to establish Sparta's government.<sup>7</sup> For this reason, the Alkmeonids, who were a noble Athenian family and enemies of the tyrant Hippias, bribed the Pythia to tell the Spartans to liberate Athens from the tyrant Hippias.<sup>8</sup> While there may have been other motives and incentives for the Spartans to go to war with the Peisistratids, it was the Delphic Oracle that justified the campaign and subsequent liberation of Athens from the tyrants. The Spartans had been requested to do so by the Gods. One of the most famous examples of the Pythia being used to justify military decisions was the prophecy given to the Athenians during the Persian Wars:

*Unable is Pallas to appease Zeus Olympian  
 With copious prayers, with counsel quite cunning.  
 Now to you once again my word I shall speak, making it adamantine:  
 The rest will be taken, all lying within the boundary of Kekrops  
 And that of the hollow of sacred Cithaeron.  
 But a wall made of wood does farsighted Zeus to Tritogenes grant  
 Alone and unravaged, to help you and your children.  
 Do not await peacefully the horse and the foot,  
 The army gigantic that comes from the mainland;  
 Withdraw, turn your backs, though someday you still will meet  
     face to face.  
 O Salamis Divine, the children of women you will yet destroy  
 While Demeter is scattered or while she is gathered.<sup>9</sup>*

The Pythia, here, gives the Athenians direct military advice. Though it is still left up to the interpretation of the Athenians, it is clear that they could not rely on a traditional land army. Themistocles convinced the Athenian people that the “wooden walls” were the hulls of ships; and he did so by using other divine signs such as a sacred snake escaping its enclosure, which Themistocles said was a sign that the god had abandoned them and was leading them to the sea.<sup>10</sup> The will of the Gods is used to persuade the body of citizens to act a certain way. Consulting the

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<sup>7</sup> Plutarch, *Lykurgus*, 6.1-3.

<sup>8</sup> Herodotus, 5.63.

<sup>9</sup> Herodotus, 7.141.

<sup>10</sup> Plutarch, *Themistocles*, 10.

Pythia, or any oracle, was a very effective way of enacting a change or a policy; however, doing so took time. A representative needed to be sent, consult the oracle, and then return back to the polis with the prophecy. Such a timespan was far too long to be of use when a general was out on a campaign. Omens, such as the sacred snake escaping in Athens, were much quicker and more readily adapted to being in the field, but also more unpredictable and open to interpretation.

Through various methods of divination, which consisted of reading omens, commanders in the field were able to consult the Gods and use the information to give the army confidence, put them at ease, and/or sway them one way or another. Commanders could use divination to justify their decisions too, even if those decisions were unpopular.<sup>11</sup> Greek religious practices were used to justify tactics, such as stalling, to an army that wanted to just go to battle because it was easier to say the Gods did not provide favorable signs than to explain why the army must wait to go into battle. This is also important to the confidence of the soldiers. Rather than telling them that they are not ready to meet the enemy head on, or that the enemy would defeat them if they went to battle immediately, commanders could rely on “bad omens” to justify waiting so as to not have to tell the men the whole truth.

### **Sacrifice**

Sacrifices and divination took place very frequently during a campaign. Sacrifices were made by the Spartan king, who was leading the expedition, to Zeus Agetor (“Who Leads Out”), and other gods associated with him, in his house. Then, upon receiving favorable signs, the *purphoros* (fire bearer) carried fire from the altar to the border where the king sacrificed to Zeus

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<sup>11</sup> J.K. Anderson, *Military Theory and Practice in the Age of Xenophon* (Berkley and Los Angeles: University of California Press, 1970), 69.

and Athena. If the signs were once again favorable, then the army could cross the border.<sup>12</sup> In order to even begin a military expedition the king leading it had to justify his right to lead through signs from the Gods. Then there needed to be further justification for the army to even leave Spartan territory. Using fire at the border sacrifice from the same altar that the king originally used created continuity in the events. It demonstrates that the right to lead the army was connected to the army's ability to leave. Crossing the border out of friendly territory is also a big step militarily. It demonstrates hostile intent from the army on the move because by leaving its home border--or possibly friendly borders--the army's movement changes from defensive to offensive--being both very symbolic in the grand scheme of a military campaign and as well as significant military decision. Having the favor of the Gods creates political justification at home, and strategic justification for the army. Seeing favorable signs would also have been a large morale boost for the soldiers themselves. Sacrifices were also made when crossing all rivers and seas, all borders, at the campground, and battleline.<sup>13</sup> Sacrifices were very frequently made on the move, likely multiple times a day.<sup>14</sup> Religious activity was a very important part of Greek warfare. Any important undertaking required consulting the divine, especially before meeting the enemy in battle.<sup>15</sup> In order to make a sacrifice a general would require time.

Marching across land is easy. Crossing a river or sea is hard and dangerous. Border crossings used normal sacrifices,<sup>16</sup> which divined answers from *hiera*--which is both a general term for rites, and a term referring to the parts of the sacrificial victim burnt on the altar or

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<sup>12</sup> Jameson, "Sacrifice Before Battle" *Hoplites: The Classical Greek Battle Experience* (New York: Routledge, 1991), 197-198.

<sup>13</sup> Jameson, 202.

<sup>14</sup> Jameson, 198.

<sup>15</sup> Jameson, 198.

<sup>16</sup> Jameson, 202.

examined for signs, as well as for the signs derived from them.<sup>17</sup> During normal peacetime sacrifices in Sparta, feasts followed public sacrifices, as parts of the victims were to be eaten, and the hides of the victims were taken for the kings.<sup>18</sup> Then the aftermath of the sacrifice itself resulted in hours of work. The victims had to be skinned and cooked and served to the guests. The hides had to be prepared for tanning in order to preserve them and put them to use later as gifts or items of use such as cloths or leather. The sacrifice itself was a very long process. First the victim had to be selected as the most perfect and undamaged of the available animals of its kind, then the animal was adorned with wreaths and other decorations, often including gold foil. There was a whole procession of men and women, and young boys and girls, accompanied by music leading the victim to the altar where it would be sacrificed. Victims had to be willing participants, so water would usually be poured on the head to elicit a nod--however, animals are not always cooperative, so this could have taken one attempt or many. Then prayers were to be offered, possibly smaller votive offerings or preliminary sacrifices depending on the occasion and scale, and then the actual killing of the victim.<sup>19</sup> A normal sacrifice simply took a very long time to perform in it of itself, even if a grand feast was not performed. For this reason, this type of sacrifice could not be performed when there was a limited amount of time. In the base camp and in home territory there are more indefinite amounts of time available and the resources on hand to perform them. Even when crossing land borders, while there is far less time because the army is moving toward the enemy, there is stability by being on land that does not exist when crossing rivers and seas.

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<sup>17</sup> Jameson, 200-201.

<sup>18</sup> Herodotus, 6.57.

<sup>19</sup> Bremmer, "Greek Normative Animal Sacrifices" *A Companion to Greek Religion*, 133-137.



Crossing rivers and seas is very dangerous because currents, tides, wind, and weather are interdependent on each other and can all change very quickly, making it hard to predict when safe passage will be optimal. Even when predictions are made correctly the window of opportunity may still be small. The danger of sending an army across such obstacles clearly calls for a sacrifice, both to honor the Gods and to communicate with them. However, the sacrifice must be made more quickly than a normal one. Hence a form of sacrifice called *sphagia*. *Sphagia* is included in *hiera* in the broader sense of “rites,” but refers to rituals focused on bloodletting and signs derived from bloodletting. A sacrifice of this type does not result in the eating of the animals’ flesh, thus requiring neither a sacrificial fire or altar.<sup>20</sup> *Sphagia* could be performed very quickly with little preparation and little post sacrifice duties. This makes this perfect for moments when time was of the essence such as river and sea crossings, and the battleline. A *sphagia* is depicted in a 5th century, red face Attic pottery shard. A hoplite in full armor can be seen piercing the throat of a ram.<sup>21</sup> There is no altar or bowl depicted that would catch the blood of the ram as would be in normal sacrifices. The most important features of the image are that the man killing the ram is dressed in full armor, and that the man is using his *xiphos*<sup>22</sup> in order to pierce the throat of the victim. A hoplite would not be wearing his armor unless he was about to do battle. The fact that the hoplite uses his sword to pierce the throat of the ram means that there was not time to use a ritual knife to cut the ram’s throat. He used the same weapon that he would use for battle in order to spill the victim’s blood. Sacrifice is a very symbolic thing, so it is entirely possible that the killing of the victim at the battle line with a

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<sup>20</sup> Jameson, 200-201.

<sup>21</sup> Figure 1.

<sup>22</sup> Greek sword with a leaf shaped blade that was a popular backup for hoplites. It was a cutting sword usually about 24 inches in length. The Spartans famously used a 12-inch version.

sword represented the intent to kill the enemy in battle, which would resultantly ask the Gods for permission to do so. While crossing a large body of water may not have had the guaranteed danger of battle, it would have required speed and courage. At the water the one killing the victim would not have been in his armor but would still have used his sword because that is what he would have had on or near his person. When *sphagia* were made at the water and on the battle line it granted the army one final confidence booster--the Gods were with them!

## **Logistics**

The various religious affairs of Greek warfare required a lot of resources as well as time. In order to have sacrifices at each border crossing, river/sea crossing, and before battles--in camp and on the battle line--Greek armies had to bring their sacrificial victims with them. Animals need people to attend to them, especially when they need to be kept in pristine condition. Animals need to eat too, so an army on the move needs to have feed for all the sacrificial victims brought on campaign. The other option would be to buy whatever is needed while marching from one place to another--a costly ordeal. For these reasons, the Spartans restricted the number of sacrificial victims to three per day, and one symbolic rooster at victory celebrations,<sup>23</sup> therefore conserving their resources.

These cumbersome logistic systems limited the range of Greek armies. Generally, Greek armies operated within a couple days' march of their homes. Prior to the Persian Wars, for example, Sparta spent much of its military focus fighting its neighbors in the Peloponnese. The struggle with their neighbor Argos over borderland at Thyrea began with "The Battle of

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<sup>23</sup> Jameson, 198.

Champions,”<sup>24</sup> before a full-fledged battle was fought between Sparta and Argos.<sup>25</sup> Argos and Sparta waged war with each other so bitterly that by the time of the Persian War they were each other's arch-rivals, or, as Kelly puts it, “traditional enemies.”<sup>26</sup> There were also the Messenian Wars of the 5th century, and several wars with Tegea in Arcadia during the late 7th and early 6th century, which did not end until the reign of Anaxandrides and Ariston, around 515 BCE.<sup>27</sup> Another notable military adventure of the Spartans prior to the Persian Wars was the campaign at Athens that overthrew the tyrant Hippias.<sup>28</sup> The Athenians fought with their neighbors too. When the Chalcidians and Boeotians had the opportunity to invade Attica during the establishment of the democracy and Peloponesian invasion of Eleusis, they took it.<sup>29</sup> The Thebans and Aeginetans also ally together in order to invade Attica.<sup>30</sup> Such close distances required very simple logistic planning. The Spartans, at this time, had the most advanced logistic system in Greece. According to Xenophon:

First the Ephors proclaim the age-groups to be called up, listing cavalry and infantry, and then also craftsmen, with the result that the Spartans have a sound supply of everything which is available in the city while on campaign as well. All equipment that the army needs centrally is specified, to be produced on wagons or baggage animals; in this way omissions are least likely to be overlooked.<sup>31</sup>

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<sup>24</sup> A battle between 300 champions of Sparta and 300 of Argos that was ultimately indecisive. Two Argives and one Spartan remained at the end of the battle. The Argives thus claimed victory based on superior numbers and left, leaving the Spartan to claim victory based on holding the battlefield.

<sup>25</sup> Herodotus, 1.82.

<sup>26</sup> Thomas Kelly, “The Traditional Enmity between Sparta and Argos: The Birth and Development of a Myth” *The American Historical Review*, 971.

<sup>27</sup> Kelly, 975.

<sup>28</sup> Herodotus, 5.64.

<sup>29</sup> Herodotus, 5.74.

<sup>30</sup> Herodotus, 5.81.

<sup>31</sup> Xenophon, *The Politeia of the Spartans*, 10.1-3.

Even though the Spartan citizen body consisted of professional soldiers, it is clear that they did not always have a force in readiness. They had to draw up the age groups into a standing army in an organized manner, which was accomplished because they were already divided into age groups.

### **Spartan Supply and Organization**

The Spartans sought to ensure that an army on the march possessed all the things they would have in the city, and that all their supplies would be loaded onto wagons and pack animals. It was common practice for Greek armies to live off hostile lands, plundering them for food, water, and other supplies,<sup>32</sup> in order to both weaken the enemy's longevity, and decrease the burden on one's own supplies. The problems with doing this are that the land can only support so many people for so long before it is stripped bare, and plunder cannot be taken in friendly territory--whether home or allied--because then the people of that land become angry, resulting in the loss of allies and support. By loading wagons and animals rather than the hoplites, it was easy to account for everything the army had. However, using animals and wagons was inefficient in terms of speed and range. More animals mean food for the animals, and thus more carts for their food, pulled by other pack animals, creating bulk for a baggage train. Wagons, while providing a mechanical advantage, must be pulled by slow moving animals, and break down on occasion, or get stuck in mud, or prove too cumbersome to bring through difficult terrain. In order to repair the wagons, spare parts needed to be loaded onto other wagons and brought along. If the wagons got stuck they had to be dug out, costing time and manpower;

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<sup>32</sup> Anderson, 51.

and if they could not be brought along, then whatever supplies they carried would have had to be unloaded and hand carried, or abandoned-- costing time and manpower, and or the very supplies.

The use of wagons and pack animals creates unnecessary bulk within the baggage train that trailed the soldiers themselves. The bulk was made worse by the followers that accompanied the army. Hoplites did not carry their own equipment. That was the job of slaves and servants. When Eurytos<sup>33</sup> was getting ready to go die in a battle at Thermopylae, he ordered “his helot” to fetch his arms and lead him to the battle.<sup>34</sup> Each full Spartiate had a helot slave to carry his equipment and assist him while on campaign--the Spartan army sent north for the Battle of Platea had seven helots for each of the 5,000 Spartans.<sup>35</sup> For each warrior there was at least another mouth to feed, an extra body to encamp, and an extra person to burden the pace. A slave with no formal training, lacking exercise other than field work could never march at the pace of a trained soldier. It was the extensive use of pack animals, wagons, and especially slaves that slowed the pace at which Sparta’s armies could move.

Another big logistic advantage was that the Spartans even maintained a uniform for the army: a red cloak and bronze shield, and for adult male citizens, long hair.<sup>36</sup> These items were issued by the state just as all the other supplies were. This ensured that Spartan Warriors already had the clothing needed for the campaign, as well as the basic equipment needed to hold one’s place in the phalanx. The Spartan state provided everything for every campaign, differing from the rest of the Greek world. Anderson states that “the superiority of the Spartan system no doubt consisted in the fact that supply and transport were provided for in the regular routine of

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<sup>33</sup> One of the two Spartans suffering from eye infections at Thermopylae--the other being Aristodemus. Both were ordered to leave, yet Eurytos stayed and died.

<sup>34</sup> Herodotus, 7.229.

<sup>35</sup> Herodotus, 7.10.

<sup>36</sup> Xenophon, *The Politeia of the Spartans*, 10.3.

mobilization. The Athenian citizen, when called suddenly to arms for the defence of the frontier, could not count on an organized commissariat.”<sup>37</sup> On short notice most Greeks would have had to gather all their own equipment, supplies, slaves and/or servants, and transportation in order to go off to war. This increases the likelihood of soldiers missing important items and being ill prepared for their journey. However, on distant expeditions, planned well in advance, the Athenians “knew well the importance of supplying properly.”<sup>38</sup> Athens, though unable to supply the army on short notice, was able to do so when given enough time to prepare.

The organizational structure of the Spartan army itself is also a point in favor of its logistics. Sparta utilized a chain of command.<sup>39</sup> Each infantry regiment has one commanding officer, four company commanders, eight section officers, and sixteen junior officers. Each man in the front rank of each file is also responsible for his respective file.<sup>40</sup> Having a detailed command structure such as this ensures that plans and changes can be communicated quickly and efficiently, as well as making it easier to distribute food, water, equipment, and plunder. It also makes it easier to account for everything. When it is clear who is in charge, those individuals can keep track of how much of something they receive to distribute to the men under them.

### **The Battle of Plataea**

The Battle of Plataea, which took place outside of the Greek *polis* of Plataea in 479 BCE, was the deciding battle between the Greeks and the Persians in the Persian War, and is an

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<sup>37</sup> Anderson, 45.

<sup>38</sup> Anderson, 45.

<sup>39</sup> Component of a command structure. It is a form of leadership structure which starts with a soldier with no leadership responsibility, then goes up one level of leadership at a time until the commander is the only left. Every higher level consists of less leaders than the preceding level.

<sup>40</sup> Xenophon, *The Politeia of the Spartans*, 10.4-6.

excellent example of Greek logistics at this time. It is particularly a good example of the problems and limitations facing Greek armies at this time.

There were few major logistical concerns for Greek armies despite some of the clear issues with the systems used by the majority of the Greek states, and even the Spartans. It is due to the short duration and distance from home that wars were fought. It was reasonable for a man to gather supplies for a short period of time, and for a small army to be able to live off the land for a limited time. When the Spartans sent an army of 5,000 Spartans, 5,000 *perioikoi*,<sup>41</sup> and 35,000 helots armed as light troops to Plataea,<sup>42</sup> it was very large by Greek standards. The Argives, who were supposed to stop the Spartans from marching out to aid the other Greeks, did not even attempt to stop such a large army. They instead sent a runner to Mardonios in Athens to say: “Mardonios, the Argives have sent me to tell you that the men of military age have marched out from Lakedaemon, and that the Argives are unable to stop them. You must now form your own plan for dealing with this situation.”<sup>43</sup> The Argives, who were experienced in fighting the Spartans, and who also had a reputation for their strong military, were clearly amazed that the Spartans had sent such a large army and were themselves unable to deal with it. When all the Greeks were assembled at Plataea, the army numbered 110,000: 38,700 hoplites and 69,500 light infantry.<sup>44</sup> The accuracy of the figures Herodotus provides is beside the point. It is clear that this was the largest Greek army assembled up to this time. The larger the army, the shorter the time it can live off the land in one place, and the more complex the logistics must be to support it. It quickly becomes clear, from Herodotus, that the Greeks did not understand how to support an

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<sup>41</sup> Hoplites levied from Spartan controlled territory in the Peloponnese.

<sup>42</sup> Herodotus, 9.10-11.

<sup>43</sup> Herodotus, 7.12.2.

<sup>44</sup> Herodotus, 9.29.

army of that size. The pass through Mount Cithaeron seems to have been the only supply route the Greeks were using to bring supplies in from the Peloponnese, and when this was cut off by the Persians there were no more supplies coming in to aid the Greeks.<sup>45</sup> The Greeks did not have a guard established for this pass. When conflict is a short distance away and is decided by only one major battle (such as with the war between Sparta and Argos after the Battle of Champions), or a few battles (as with Sparta and Tegea) supply routes are very short and not easily attacked because they are so close to the army. But at Platea the line was longer. The Greek Alliance failed to recognize the vulnerability of their supply line and left it unprotected, resulting in the line being cut off. This is also a strategic error, but it stems from the lack of understanding of how to supply large armies. The Greeks also lost access to the spring which they drew water when the Persians spoiled it because they did not have a large enough guard for it, which, coupled with the lack of food, worried the Greeks.<sup>46</sup> The situation they found themselves in could have been avoided if the various contingents had better communicated to gather many more days' supplies rather than relying on the land--the spring, for example.

## **Strategy**

### **Equipment**

Strategy, being a product of how a general chooses to utilize the capabilities of his army in order to accomplish a set of goals in a defined area, is invariably affected by the equipment that is used by the soldiers. In Classical Greece warfare revolved around hoplite--a heavily armored soldier whose main feature was the large round shield he used. The armament was more or less standardized for the whole of the Greek world. Hoplites wore helmets and cuirasses, or

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<sup>45</sup> Herodotus, 9.38-39.

<sup>46</sup> Herodotus, 9.49-50.



nothing at all, and were equipped with a spear, sword, and shield. The shield was an *aspis*--also known as a *hoplon*, which is where the word hoplite comes from. The shield was round, being a little over thirty inches in diameter, slightly convex, and had a flat rim of bronze around the edge.<sup>47</sup> The most prominent feature of the *aspis* is the type of grip it uses. Unlike other shields of its day, the *aspis* does not use a single hand grip in the center of its back. Rather, there is a metal armband, which a hoplite would have placed his arm into up to the elbow, and a cord that ran around the whole perimeter of the shield's rear that a hoplite would grab with his hand. This is demonstrated by a 5th century, red figure kylix that depicts the Greeks of the Trojan war as hoplites killing the Trojans.<sup>48</sup> The shield was the most important piece of gear for any hoplite. That is because the shield was the one thing needed in order to form a phalanx. It provided protection for the individual wielding it, and the person to his left (the shield protruded about half of itself left as a result of being so deep on the arm),<sup>49</sup> but more importantly it maintained the unbroken wall of shields that faced the enemy, thus protecting the whole army.

The arms employed by hoplites are a central factor of the *othismos* debate.<sup>50</sup> The shield used was round and convexed, allowing a hoplite to easily rest the shield on his shoulder--possibly even drive his shoulder into the shield for a stronger push. The convex design, it is argued, fits well into the back of the man in front of each hoplite. The Argive Grip employed by the *aspis* is what allows the user to place his shoulder into the shield. It is argued that this grip disallows the user from rotating the shield to the opposite side of the body, resulting in a need for

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<sup>47</sup> Anderson, 15.

<sup>48</sup> Figure 2.

<sup>49</sup> Anderson, 16.

<sup>50</sup> A debate between historians of hoplite warfare that is about whether there was a literal *othismos*, or pushing match, between hoplite armies, or if this was a figurative expression and battles were fought and won by the use of weapons.

someone else to be to the right in order to protect the flank--it is therefore a terrible shield for a one-on-one duel. This is ludacris. The Argive Grip provides far more positive control over a shield than a traditional shield grip--a central handle held onto by the user's hand. Using the Argive Grip would still easily allow a hoplite to move his shield to protect his flank. The greatest advantage of the grip is its ability to conserve energy. Because the grip allows the user to rest the shield on his shoulder while still maintaining control in a defensive posture, a tired soldier would be able to rest his shield arm during combat. The grip, more importantly, decreases the energy spent over time using the shield normally. Holding a shield with a central hand grip places the shield at the end of the arm, which is more taxing than it being strapped to the forearm for two main reasons: holding the shield in the hand requires the user to strain the forearms and the rear of the shoulder, which are small muscle groups, while the Argive Grip would strain the rear of the shoulder and the upper back--which is a larger muscle that is less easily taxed.

Hoplites were largely untrained citizen-soldiers. By using a large, heavy shield they were able to gain the protection they needed to fight in a battle. But such a shield is useless if none of the soldiers can actually wield it. That is why the Argive Grip was employed. It made it easier to hold and move such a heavy shield for long durations of time.

The personal protective equipment that hoplites opted to use were the helmets, cuirass, and grieves. The Chigi Vase depicts hoplites wearing a bronze "bell cuirass" and greaves as early as the 7th century BCE.<sup>51</sup> The cuirass evolved into the *pteryges*: a bronze cuirass that replaced the outturned flange of the "bell cuirass" with strips of metal or reinforced leather hinged at the bottom, straight edge of the armor to allow freedom of movement. This cuirass only survived

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<sup>51</sup> Figure 3.

until the end of the Persian Wars though.<sup>52</sup> It also appears that a lighter corslet of linen or leather may have been in use.<sup>53</sup> It is clear from Herodotus, though, that bronze armor was the most popular type worn in the time leading up to the Persian invasions of Greece.<sup>54</sup> During the 6th century thigh armor and grieves were also used; however, by the 5th century only grieves were still in use.<sup>55</sup> Another optional protectional measure was the shield apron: a rectangular piece of cloth designed to protect the user from blows to the legs.<sup>56</sup> The Corinthian style helmet was used to cover the head, and starting around 500 BCE, the Attic helmet.<sup>57</sup> The Corinthian style completely encloses the head, and covers the neck and face, as is depicted on many vase painting of the time, including the Chigi Vase.<sup>58</sup> The Attic helmet was essentially the same as the Corinthian, except the cheek pieces were hinged and could be tied up, and the nose protector was gone.<sup>59</sup> Hoplites from their advent in the 8th century BCE until the end of the Persian Wars clearly favored protection over mobility. They sought protection against blows dealt by weapons.

The primary weapon of a hoplite was the spear. It was generally seven to eight feet long, featuring a heavy iron point and large metal butt spike.<sup>60</sup> It is clear that multiple spears were carried in the event that the first one broke. The Chigi Vase shows that the hoplites in the front ranks have spears leveled for battle and another set of spears still pointing up. The hoplite all the way on the left, who is still getting dressed, clearly has a spear shorter than the other behind his

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<sup>52</sup> Anderson, 20.

<sup>53</sup> Anderson, 21.

<sup>54</sup> Herodotus, 2.152.4.

<sup>55</sup> Anderson, 24.

<sup>56</sup> Anderson, 17.

<sup>57</sup> Anderson, 28.

<sup>58</sup> Figure 3.

<sup>59</sup> Figure 5.

<sup>60</sup> Anderson, 37.

shield, as does the closest hoplite in the second rank on the left.<sup>61</sup> It is very likely that early hoplites carried javelins as well as spears in order to throw them prior to contact. There is no mention of javelins being carried into battle by Herodotus or any of the poets, indicating that if they were present, it was prior to the Persian Wars. As a backup to their spears, or in case the enemy became too close for spears to be of use, the sword was used. There were two types used: a double edged one with a leaf shaped blade, and a single edged one with a forward curve--<sup>62</sup>the *xiphos* and *kopis*.

### **Tactics**

According to Max Boot: technology influences tactics.<sup>63</sup> The phalanx was developed as a result of the introduction of the *aspis*. However, technology will only take the development of tactics so far. Once the hoplite panoply began to solidify technology began to change as a result of the desired tactics. It is evident that the phalanx was not represented in art prior to the creation of the *aspis*. It is also evident that the cuirass began to change as the Greeks became more experienced with the new style of warfare. The bell-shaped metal around the hips were replaced by strips of metal and leather in order to free the movement of each hoplite, while still providing appropriate protection.

It is commonly thought that hoplite warfare revolved around the pushing and shoving match between armies--*othismos*. But that is not so. The traditional argument is that the vocabulary surrounding battles, which refers to “pushing,” “shoving,” and “mass”, was a literal

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<sup>61</sup> Figure 4, Figure 3.

<sup>62</sup> Anderson, 37.

<sup>63</sup> Max Boot, *War Made New: Technology, Warfare, and the Course of History 1500 to Today* (Gotham Books: New York, 2006), 9.

pushing match.<sup>64</sup> This vein of thought stems from the desire to take Greek very literally, unlike how modern battle may be described, as well as to solve the unknown of what the rear ranks would do in a battle. Anderson, for example, says that

The rear ranks, then, give weight and impetus to the “cutting edge” in front. When the front ranks on either side met, the men behind them did not stand waiting for their leaders to be killed before taking their places; still less did the front-rank men fight for a time and then fall back to the rear to give someone else a turn. The rear ranks closed up, and when we read of one Greek army pushing another one back, or unable to bear the weight of another’s attack, the words are to be taken literally, not as mere figures of speech, as they would be in an account of a modern battle.<sup>65</sup>

Greek is a very poetic language. Ancient speakers of it used many expressions when speaking--δίκην λαμβάνειν, literally means to seize justice, but is used as to exact punishment--and the grammar of Ancient Greek even allows for words to be left out of clauses--these words (the subject noun, for example) are supplied by context from earlier sentences or clauses in the passage, or words such as the verb εἰμί (to be) are simply assumed given the context of that clause. Arguably the two most famous works of literature to come out of Greece are Homer’s *Iliad* and *Odyssey*, two epic poems. Greek is known for its poetry and ability to be flexible and expressional. Therefore, it would not be out of the ordinary for a reference to one army being “pushed” off the battlefield to have been beaten, not literally pushed. In fact, Goldsworthy states,

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<sup>64</sup> A.K. Goldsworthy, “The *Othismos*, Myths and Heresies: The Nature of Hoplite Battle” *War in History* (Sage Publications: <https://www.jstor.org/stable/26004342>, 1997), 1.

<sup>65</sup> Anderson, 176.

Krentz<sup>66</sup> has argued that there is no good reason to interpret *othismos* literally in all cases.

The verb *otheo* and its compounds, which appear more frequently than the noun in battle descriptions, convey much the same meaning as expressions like 'pushed back' or 'forced back' in an account of a modern battle. The Greek historians inherited these terms from Homer, who described loose-order combat which definitely did not involve massed shoving, and use them in the context of naval as well as land battles.<sup>67</sup>

It would have been impossible for battles to have taken place as pushing matches. Hoplite battles are described to have taken place over long periods of time. Herodotus describes the first day of battle at Thermopylae: “The fighting went on all day.”<sup>68</sup> Even though the Spartans were not fighting other heavily armed hoplites--rather their enemies were the Medes and Kissians,<sup>69</sup> who were lightly armed infantry, and later the Persian Immortals, who were the Persian equivalent of heavy infantry<sup>70</sup>--pushing masses of men all day while wearing heavy armor would have been incredibly taxing. Even if the words “all day” are taken figuratively, it is clear that the fighting took place for a long time that day. There are many other references to battles lasting “‘a long time’ or ‘most of the day.’”<sup>71</sup> As anyone who lifts weights can attest to, after a hard hour or two of lifting on leg day your legs are wobbly and walking is a challenge. However, lifting weights provides for breaks in between sets. Even running and weighted hikes do not have a constant forward press with the legs. Another interesting point which can be made against the

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<sup>66</sup> Peter Krentz is a leading expert of hoplite warfare, and strong opponent of the rugby scrum theory of hoplite battle.

<sup>67</sup> Goldsworthy, 4.

<sup>68</sup> Herodotus, 7.210.2.

<sup>69</sup> Herodotus, 7.210.1

<sup>70</sup> The Immortals were not nearly as heavy as hoplite infantry.

<sup>71</sup> Goldsworthy, 4.

idea of a literal *othismos* is that the Spartans marched into battle in an orderly manner to the playing of flutes. Other Greek armies would run at the enemy once they became close enough; leading some to believe that the charge was designed to create a shock that would knock the enemy off their feet and give the advantage for the *othismos*.<sup>72</sup> Thucydides' description of the beginning of the Battle of Mantinea illustrates what first contact was for that battle:

After this they joined battle, the Argives and their allies advancing with haste and fury, the Lakedaemonians slowly and to the music of many flute-players--a standing institution in their army, that has nothing to do with religion, but is meant to make them advance evenly, stepping in time, without breaking their order, as large armies are apt to do moments before engaging.<sup>73</sup>

The Spartans, who were considered to have the premier military organization in all of Hellas at the time of the Battle of Mantinea (and for the 300 years leading up to it), did not charge the enemy. Had there been an advantage to charging the enemy at a run, the Spartans would have employed it, otherwise they would have always been at a disadvantage at the onset of battle. Thucydides makes it clear that this was a long-standing part of the way Spartans fought when he called the slow march a "standing institution." By slowing marching forward, in step to the playing of a flute, the Spartans maintained a solid, uniform formation. Running forward broke up the formation. Thucydides' inclusion of this is meant to show how the Spartan way is better. In *othismos*, having a solid line of men would not matter as much as having depth would. However, because the spear was the primary means of victory for Greek armies, a uniform line of men was advantageous. If one lone hoplite is fighting a Spartan, then the Spartans to the left and right of the engaged one can help him kill the lone assailant. In this way the Spartans have the advantage. While running at an enemy force would certainly have been terrifying, and may

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<sup>72</sup> Goldsworthy, 1-2.

<sup>73</sup> Thucydides, *The History of the Peloponnesian War*, 5.70.

have created some sort of shock, it was also a release of pent-up anxiety and fear for the ones charging. Rather than being done for a particular advantage, it is likely that the sudden rush was the result of fear getting the better of untrained men.

Language used in the ancient sources is actually consistent with the theory that weapons were the primary form of engagement from the outset of battle. During the Battle of Thermopylae it is stated that the Immortals “fared no better than the Medes, and indeed they suffered the very same setbacks. The fighting continued to take place in a confined space, with the Persians using shorter spears than those of the Hellenes and unable to derive any advantage from their superior numbers.”<sup>74</sup> The Persians had vastly superior numbers than the Greeks at Thermopylae. Had the battle been all about a pushing match, the sheer weight of thousands of more men would have been far too much to bear for the small Greek force. Herodotus, instead, comments on the size of the Persian spears. The Greeks used their spears to kill the onslaught of Persians and Medes and Kissians and other allies of Persia. There is also mention of “crossing spears” between other Greek hoplites during the Battle of Mantinea when the enemy fled before even fighting the Spartans,<sup>75</sup> as well as Xenophon’s reference to the enemies of Sparta closing within “spear-thrusting distance” at Coronea.<sup>76</sup> Both examples reference the spear to describe an aspect of battle. The former being used to describe how a part of battle went, and the later describing distance.

Another interesting factor of the *aspis* was the bronze lip that ran the perimeter of the shield.<sup>77</sup> During a pushing match between two phalanxes this feature would be completely

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<sup>74</sup> Herodotus, 7.211.2.

<sup>75</sup> Thucydides, 5.72.

<sup>76</sup> Xenophon, *Hellenica*, 4.3.17.

<sup>77</sup> Figure 6.



useless. The rim would be able to catch and deflect stray thrusts and slashes from spears and swords, or possibly be used offensively to bash enemies in a last ditch effort. However, in a pushing match none of these are even possible, so the rim fills no purpose.

But if the goal of warfare was to literally push the enemy army off the battlefield, why would the spear be the primary weapon employed? And why would the shield have a flat bronze rim? Hoplites carried swords as a secondary weapon, not a primary. Had the goal been to close to be shield to shield, the sword would have been the primary weapon of the Greeks. It is argued that spears were broken in the initial encounter, so the sword was then used. In that case it would have been more efficient to become swordsmen. Yet the spear, a ranged weapon, was the primary weapon of the hoplite. In order to use a spear, even the close range spear of the hoplite, space was the key. Both space in front and behind the hoplite. The large buttspike used by hoplites may have been useful for eliminating enemies who had fallen on the ground, or to use a weapon if the spear cracked in half, and even to stick in the ground; but it would also have been good at sticking the man behind the user if he were too close. The spear indicates that battles were not pushing matches, rather a fight between spearmen. Battles were won by the spear, as Herodotus indicates when speaking on Egypt,<sup>78</sup> not *othismos* won.

The Chigi Vase illustrates what it would have looked like for hoplite armies to battle each other. The vase clearly illustrates the opposing armies fighting each other with spears, not pushing shield to shield. It is also very clear that two spears were carried into battle. The men in the front ranks each have a spear raised and ready to strike and a spear held skyward. The rightmost rank of hoplites has three spears already leveled as they approach the battle and still have reserve spears. The men already leveling their spears, before even being close enough to

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<sup>78</sup> Herodotus, 2.107.3-4.

use them demonstrates that the hoplites behind the front rank men did not immediately come up and begin pushing them forward. The men in the second rank, it seems, were close enough to employ their spears in some way. Likely they acted as the second line of defense for those in front of them because their spears would not have been long enough to effectively strike at those in the front enemy rank. The presence of a gap between lines is affirmed by the presence of the flute player all by himself in between the first and second rank on the left side. Had he been meant to be in line with a row of hoplites the artist, who was clearly capable of stacking the hoplites so that it was clear that they were nearly touching each other, would have placed the flute player into one of the rows. By applying the same logic, it is clear that the artist did not make the hoplites fight each other with spears because it was easier to depict, but because it was the reality of warfare. The Chigi Vase also shows that when hoplites fought, they were shield to shield with the men to their sides, creating a shield wall. Two of the hoplites on the left of the vase, including the one still getting ready, clearly have one spear that is much shorter than the other. These spears are likely javelins, indicating that hoplites, at least originally, did begin the battle by throwing missile weapons just as in Homeric warfare. Later this role was turned over to light infantry completely--at Plataea 69,500 light infantry were present.

## **Chapter 2: The Evolution**

The manner in which Greeks conducted war began to change with the end of the Persian War. The threat of Persian domination brought many cities together, forever altering the political landscape of the Greek peninsula. These changes are what began the evolution in Greek warfare that took place over approximately 150 years.

## **Religion**

The religious life of the ancient Greeks was a part of their daily lives. The same was true as the new era was ushered in after Platea. If anything, the religious lives of ancient Greeks became even more complicated due to the much greater wealth that developed in Greece.

For example, the regular sacrifices and subsequent divination became even more important for generals and commanding officers. The Peloponnesian War lasted, on and off, for about fifty years, with each of the three major parts lasting for years on end. "From ascertaining the purposes of the gods from day to day there were the prophets, without whose skilled technical advice no Greek commander took the field, whatever he may have felt privately about old-fashioned religious observances."<sup>79</sup> This is no different than it had been during the Persian War. The Spartan army's various religious affairs were the duty of the King, just as it had always been. Anderson points out that Xenophon emphasizes that the king was freed from his administrative duties so that he would be able to focus on the concerns of the gods and generalship.<sup>80</sup> These duties, performed daily over the course of many months, would take up a tremendous amount of time, money, and resources. Just as it had always been in Greek warfare the number of sacrificial beasts needed could quickly grow out of control, and so needed to be controlled. That is why the Spartans, for victories, brought the sacrifice down to one symbolic rooster. It is a reflection of the ways in which warfare was changing. It had become something more complex than border wars where it was easy to bring animals for sacrifice. Even the victory monument, which was especially important for Greek states, changed. Normally, the trophy or monument was established at the turning point of the battle, or the nearest shoreline for naval

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<sup>79</sup> Anderson, 69.

<sup>80</sup> Anderson, 69.

battles. However, there is a case in which a victorious Peloponnesian fleet sailed eighty kilometers to establish one, in order to “make a statement.”<sup>81</sup> The monument was no longer very close to the enemy’s home, even if it were just across the border. Now it could be on the other side of Greece. They, therefore, took on a more symbolic meaning and could be used in a manner which reflected that new meaning.

### **Logistical Changes**

Athens is an excellent demonstration of the improvements to Greek logistics. As the city grew in size and power the trouble of feeding its citizens arose. To compensate for this the Athenians began to import grain from the Black Sea region. In order to secure their grain supply Athens, under Pericles, campaigned to gain control of the Chersonese:

For not only did he strengthen their cities with an abundance of men by bringing them a thousand of Athenian colonists, but he also enclosed the isthmus with bulwarks and barriers, fortified it from sea to sea against the raids of the Thracians who crowded around the Chersonese, and shut out a perpetual and grievous war in which the country had been engulfed throughout that period.<sup>82</sup>

The Athenians were able to completely take over the supply of their grain from the Black Sea. Pericles was able to coordinate military action to destroy the aggressive tribes that plagued the region, settle a thousand colonists, build fortifications on land and sea, and continue shipping grain to Athens. All this took place on the other side of the Aegean from Athens. The simple act of completely controlling the grain supply for the city was far more complicated than what had previously been done, which was simply to trade for the grain. At this point Athens was trading, but also controlling security and shipping all the way from the Black Sea to the Port of Piraeus.

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<sup>81</sup> Daniel P. Tompkins, “Greek Rituals of War” *The Oxford Handbook of Warfare in the Classical World* (New York: Oxford University Press, 2013), 531.

<sup>82</sup> *Pericles*, 19.

The conflict between Athens and Sparta caused men to fight farther from home than they ever had before. The logistic systems employed by Greek armies after the Persian War became increasingly more complex in order to allow this to happen. During the age of classical hoplite warfare, conflicts were localized--meaning armies did not have to travel very far and for more than a couple days. However, the Peloponnesian War sent armies all over Greece and beyond--Greek armies even fought in Thrace and Sicily. In order to successfully campaign over these greater distances, the logistics had to be able to reach the armies and support them for much more than a couple days.

It is clear that by the end of the Peloponnesian War Greek armies were thinking in much longer terms. An army going through barren country was to take “no less than twenty days’ provisions” for a march expected to be “not less than fifteen days.”<sup>83</sup> This is much longer than would have been expected of Sparta’s army marching to fight their neighbors in Arcadia or Attica. The Spartans brought everything that would be found in Sparta with them on campaign. This resulted in extra, unneeded things being brought along. But bringing nonessentials was perfectly feasible for a campaign only a few days’ march away. But when the fight was all the way across Greece these things would prove to slow the army down too much. This is apparent because the *Cyropaedia* outlines that only enough wine should be brought to make the transition to drinking the local water safe. The men were also to bring enough grain, and to reduce their bedding to carry more supplies.<sup>84</sup> Clearly comfort is sacrificed for the sake of efficiency. Water, which could be obtained from the local area was to be drunk instead of wine because that was one less thing to carry, and water was easily obtained from one region to the next. A diet of

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<sup>83</sup> Xenophon, *Cyropaedia*, VI 2.25

<sup>84</sup> Anderson, 43.

grain, especially for a Spartan army, was not the most appealing, but was much easier to carry “enough” grain than it was to carry meat. Having enough bedding to be somewhat more comfortable than sleeping on the ground is necessary to ensure the army is well rested. Bedding also provides a barrier between wet ground, dirt, and bugs--all of which can spread disease. However, it is not necessary to have enough bedding to be as comfortable as at home. Decreasing the bedding allowed for more essentials to be carried, lightening the long term load for each soldier as well.

## **Strategy**

### **Equipment**

An interesting thing began to occur after the Persian War with regard to hoplite armor. Armor actually became lighter: with the cuirass being made of different materials or abandoned altogether, while helmets that were less restrictive to the wearer’s sight and hearing became much more popular. Thigh and arm guards were abandoned by the end of the sixth century, leaving only shin armor, which is often omitted in works of art from the fifth and fourth centuries. During the Persian War, it is clear that the bronze cuirass started to be replaced by the linen corslet, and by the Peloponnesian War the linen corslet was the heaviest type of armor worn by rank and file hoplites, who usually wore no armor other than greaves--even those were sometimes not worn.<sup>85</sup> Hoplite helmets, which were primarily in the Corinthian style--which provided full coverage of the head--evolved into the Attic style.<sup>86</sup> The Attic style greatly resembled the Corinthian, but had an open face and openings for the ears.<sup>87</sup> This style of

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<sup>85</sup> Anderson, 41.

<sup>86</sup> Anderson, 40-41.

<sup>87</sup> Figure 7, Figure 8.

headcover eventually gave way to the pilos, which was a conical shaped head covering, likely made of felt.<sup>88</sup> The armor used by hoplites, starting during the Persian War, gradually evolved to be lighter, and to open the line of sight and ability to hear. A pure hoplite battle of heavy infantry against heavy infantry requires soldiers to be able to see directly in front of them, and really no more. Even hearing was not particularly important as it would have been much too loud to hear more than a few men away, even without a Corinthian helmet. Light infantry was used, but not to the extent that it was by Greek armies of Xenophon's day and age. The Persians forced the Greeks to change. It was adapt or die.

It is no coincidence that during the Peloponnesian War there is an increase in the use of light infantry and a decrease in the amount of armor worn. A depiction of a warrior departing on an Attic red-figure amphora (440-430 BCE) shows a young warrior about to have a drink. He is holding his shield and spear and has a sword on his hip. He wears an attic style helmet with an open face and a chiton.<sup>89</sup> The painting was done five to fifteen years before Sphacteria and it is clear that the young warrior wore less armor than his father or grandfather did. A scene from the middle of the fifth century shows Nike setting up a victory trophy that wears a linen cuirass and a Corinthian style helmet,<sup>90</sup> rather than a bronze cuirass. The famous scene from a late fifth century, Attic tombstone of an Athenian hoplite about to kill a Spartan hoplite demonstrates how armor became so little that it was only the bare minimum needed. Both warriors wear only a cloak, and the dying Spartan is clearly wearing just the pointed pilos helmet.<sup>91</sup> On a victory scene from late fifth century Athens Nike and an Athenian hoplite are depicted standing next to victory

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<sup>88</sup> Anderson, 41.

<sup>89</sup> Figure 9.

<sup>90</sup> Figure 10.

<sup>91</sup> Figure 11.

trophies.<sup>92</sup> Both trophies have a pilos sitting atop, rather than a Corinthian helmet. The trophy in Nike's scene clearly has straps etched into the shoulders. These straps pop out from the rest of the body, indicating they are on top. This is the style of armor that would have been worn. The straps indicate that it was a linen cuirass of some sort, not a bronze one, which would have been depicted as a solid piece. The trophy in the scene with the hoplite, however, is draped in a cloak rather than armor. The cloak is likely meant to represent the scarlet cloak of the Spartans--also, illustrating that even the Spartans, who were equipped by the state, wore little to no armor. The Athenian hoplite himself does wear armor though. The helmet is Attic and he is clearly wearing a cuirass, as well as holding his shield and spear. The hoplite's cloak is attached to something on his right shoulder. This represents the same area that the shoulder straps of the linen cuirass were attached to. "Dionysius I of Syracuse provided body armor for his general officers, cavalry, and guards, but not for his rank and file infantry, when equipping an army to fight against Carthage."<sup>93</sup> Syracuse was an extremely wealthy city, but still did not provide its whole army with armor. The same seems to be true for other Greek states of the time. The Athenian depicted in the victory scene is most likely an officer or a much wealthier citizen because he is wearing armor. Even Xenophon's 10,000--professional soldiers--did not have armor, but Xenophon, an officer, did.<sup>94</sup>

## **Tactics**

While the equipment that hoplites used changed, as well as the way the rest of the army's role around the phalanx changed, the way that the phalanx itself functioned remained the same--which is important for the manner in which Greek armies changed. The same language applied to

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<sup>92</sup> Figure 12.

<sup>93</sup> Anderson, 27.

<sup>94</sup> Anderson, 27.



battles between Greek hoplites is applied by Xenophon when he describes the Egyptian phalanx. Xenophon explains that the long Egyptian shields were excellent for pushing; however, the 100-rank deep phalanx employed prevented most of the men from battling due to being too far from the enemy to use their weapons.<sup>95</sup> During Xenophon's age, generals began experimenting with the depth of phalanxes, which many argue is evidence of the *othismos* argument being correct. The increased depth concentrates the weight of the men. However, Xenophon points out that in the 100-man deep phalanx, most of the formation cannot engage in the fighting. It is clear that engaging with weapons was the goal.

The integrated Persian army proved to the Ionian Greeks that heavy infantry was vulnerable to light infantry and archers from the rear and sides when the Carians were defeated at the Marsyas River by a much larger force of Persians.<sup>96</sup> The Spartans at Thermopylae understood this, which is why guards were posted at the pass atop the mountain.<sup>97</sup> The goal would have been to slow the Persians down enough for the allied force to escape without being flanked. The Athenians and Plataeans at Marathon are another good example of this. The Greeks deployed themselves so that they matched the length of the Persian line, leading to the center of the Greek line being "only a few rows deep and thus the army was at its weakest there; each wing, however, was strong in numbers."<sup>98</sup> The Athenians also "charged at a run".<sup>99</sup> Krentz states that the charge of the Athenians and Plataeans was essential to avoid being stopped by Persian cavalry and archers.<sup>100</sup> The Athenians ran almost a mile to reach the Persians when the normal

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<sup>95</sup> Xenophon, *Cyropaedia*, VI.3.21-VII.1.33.

<sup>96</sup> Herodotus, 5.119.1.

<sup>97</sup> Herodotus, 7.213.

<sup>98</sup> Herodotus, 6.111.3.

<sup>99</sup> Herodotus, 6.112.1

<sup>100</sup> Peter Krentz, *The Battle of Marathon* (New Haven: Yale University Press, 2010), 143.

practice was to march toward the enemy, charging only when fairly close. Not only did they run, but the Athenians did not use their archers and cavalry as archers and cavalymen. They also joined the phalanx with spears in order to stretch out the line.<sup>101</sup> Miltiades, the Athenian commander, clearly understood the dangers posed to the hoplites by archers and cavalry. Lacking sufficient of either, he neutralized the Persians' ability to outflank the Greeks, as well as their ability to suppress the hoplites through archery fires. Fighting a highly mobile enemy requires more maneuverability and the ability to see and hear more than what is directly to the front and sides. The Greeks learned this as well as the importance of using cavalry and light infantry in conjunction with heavy infantry.

The lessons learned fighting the Persians were put into practice during the Peloponnesian War when the need for victory inspired military innovations. The most immediate result of the Persian War was the formation of Delian League by Athens<sup>102</sup> and the reformation of the Peloponnesian League by Sparta.<sup>103</sup> Both leagues are evidence that the Greeks understood they were stronger together, than they were alone. The formation of alliances was important because it is what allowed the Greeks to begin forming armies under the principle of combined arms. Herodotus mentions that thousands of light infantry accompanied the massive Greek army to Platea, but does not mention how exactly they were used. It is evident that they were used, but because their role was not included it is evident that they were not considered particularly important. When Thucydides writes his history of the Peloponnesian War, though, that changes. At Sphacteria Demosthenes arranged his light infantry, consisting mainly of missile throwing

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<sup>101</sup> Krentz, 151.

<sup>102</sup> The league was created after the breakdown of the Hellenic League, which was the alliance of Greek states that fought the Persians. The Delian League was designed to be able to defend its constituent states from future Persian aggression. Athens headed the alliance, while the treasury was kept at the sacred island of Delos.

<sup>103</sup> The league was a loose confederation of Peloponnesian city-states with Sparta at the head.

men,<sup>104</sup> into companies of 200. He used these companies to harass and decimate the Spartan hoplites, who were much too heavy and slow to catch the light armed men. Demosthenes' light infantry simply ran away and behind the Spartans every time they chased them.<sup>105</sup> Sphacteria took place about fifty years after the Battle of Platea, and by this point the integration of light infantry had won the Athenians a victory over the Spartans that shook the Greek world. Thucydides states that the Sciritai took up the left wing of the Lakedaimonian army at the Battle of Mantinea and that in the Spartan army they "have that post to themselves alone."<sup>106</sup> The Sciritai were an elite corps of light infantry in the Spartan army. By taking up the left wing they are able to attack the enemy phalanx on its vulnerable flank. Thucydides says that the "first rank along the whole line, exclusive of the Sciritai, consisted of four hundred and forty-eight men."<sup>107</sup> The light infantry were not able to hold the line against heavy infantry, but that was not their job. During the actual battle the Mantineans began to overtake the Sciritai, so King Agis tried to move them and the Thracian Brasideans farther out to the left and have the Polemarchs Hipponaidas and Aristocles to fill the gap.<sup>108</sup> Agis clearly understood the strengths and weaknesses of his light infantry units and how to deploy them for battle. Both Sphacteria and Mantinea were pivotal battles in the Peloponnesian War, one in the beginning of the conflict, the other in the middle, where light infantry played a decisive role.

### **Naval Warfare**

Equally as important as the more efficient integration of light infantry into hoplite armies was the increased importance of naval warfare. Even though Athens was a port city with a navy,

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<sup>104</sup> Archers, slingers, stone throwers and javelin men.

<sup>105</sup> Thucydides, *The History of the Peloponnesian War* 4.32.

<sup>106</sup> Thucydides, 5.67.

<sup>107</sup> Thucydides, 5.68.

<sup>108</sup> Thucydides, 5.71.

the Athenians did not truly realize the importance of having a strong navy during the Persian Wars when they received their prophecy and won a great victory at Salamis. Themistocles persuaded the Athenians to use revenues from their silver mines to build triremes for their war with the Aeginetans--an island state. He did this so that Athens would have a navy to fight the Persians, who Themistocles saw as a long-term threat.<sup>109</sup> The connotation given is that the Athenians agreed to build the ships because they would help them reach the Aeginetans, not because they saw it as their path to power like Themistocles did. Salamis was the victory at sea that the Athenians needed to realize the importance of a navy. Athens became Greece's first true naval power when it formed the Delian League, which required a quota on ships that the Athenians eventually, along with tribute, took for themselves from their allies.<sup>110</sup> Athens used its naval superiority to keep the Persians out of the Aegean and to govern its empire. Athens' naval superiority proved to be the deciding factor in forcing the surrender of the Spartans on Pylos.

The Athenians would not let any of them go, but themselves called for heralds from the mainland, and after questions had been carried backwards and forwards two or three times, the last man that passed over from the Lakedaimonians on the contingent brought this message: 'The Lakedaimonians bid you to decide for yourselves so long as you do nothing dishonorable;' upon which after consulting together they surrendered themselves and their arms....The blockade in all, counting from the fighting at sea to the battle in the island, had lasted seventy-two days.<sup>111</sup>

Sparta was a land-based power, not a sea based one. Neither they nor their allies had the means to stand up to the Athenian fleet at that time. While Athens became a naval power out of need to survive against the Persians, Sparta adopted a navy in order to defeat the Athenians. Sparta had proven that it was decisively the land-based power of Greece, but Athens had proved

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<sup>109</sup> Plutarch, *Themistocles*, 4.

<sup>110</sup> Thucydides, 1.18-19.

<sup>111</sup> Thucydides, 4.38-39.

itself at sea. To combat this the Spartans appealed to the Persians for help,<sup>112</sup> which came mainly in the form of money. Plutarch says that after Athens' failed in its Sicilian expedition, the Greek world thought that they would lose control of the sea. When they did not the Spartans sent Lysander to gain control.<sup>113</sup> Even though the Spartans controlled the land they still could not defeat Athens. Greek armies of this time were still very poor at sieges. Athens, being a walled city with a protected port--the long walls connected the port and the city--the Spartans had no choice but to win at sea to force capitulation. Lysander obliterated the Athenian fleet at the Battle of Aegospotami when he caught them by surprise on the beaches.<sup>114</sup> Without the ability to import grain Athens went into a famine. Lysander took advantage of this by sailing to and capturing the Port of Piraeus and the long walls.<sup>115</sup> In this manner Lysander ended the Peloponnesian War. Despite being a land-based power, Sparta's victory over Athens ultimately came from gaining control of the sea. Greek warfare had evolved to be able to wage on land and on sea, and use both forces together in order to achieve victory. Sparta essentially sandwiched Athens between its army and its fleet. By gaining control of the land Sparta had prevented Athenian farmers from growing crops, and by cutting off the Athenians from the sea prevented commerce and the import of grain. Had Athens attempted to leave by land Sparta's army would attack, and if by sea Sparta's fleet would attack. A combined arms dilemma had been applied to Athenians, a tactic that had not been present before.

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<sup>112</sup> Plutarch, *Lysander*, 4.

<sup>113</sup> *Lysander*, 3.

<sup>114</sup> *Lysander*, 12.

<sup>115</sup> *Lysander*, 14.

## **The Theban Revolution**

Hoplite warfare entered its final phase of evolution during the Fourth Century BCE when the Theban general Epaminondas, along with the captain of the Sacred Band, Pelopidas, revolutionized the way that hoplites fought other hoplites in battle. The first step in this process was the development of professional military forces in Thebes. The advantage the Spartans had over other Greek states for centuries was that they were a professional military force. However, the Peloponnesian War created many battle-hardened veterans from cities all over the Greek world, increased the importance of mercenary forces, and demonstrated the importance of professional forces.

The Sacred Band of Thebes was the first real development of professional, state-sponsored soldiers outside of Sparta. Plutarch provides a description of the unit:

The Sacred Band, it is said, was first formed by Gorgidas from three hundred handpicked men, for whom the city provided training and board and who encamped in the Cadmeia; that was why they were also called the City Band; for in those days the citadels were appropriately called cities. Some say that this company was made up of lovers and beloveds. ... The corps bound together by the friendship of lovers is indissoluble and unbreakable, since lovers who love their beloveds, and beloveds who feel shame before their lovers, stand firm in danger for one another's sake.<sup>116</sup>

The Thebans understood the importance of a professional military force, and as such supported one. The Sacred Band was fed at public expense, and lived communally in the Theban citadel, both of which allowed them to train without worry of other work. The Spartans understood the importance of communal living for building a sense of comradeship and loyalty toward each other, which is why the Spartans all lived in barracks and ate in their respective mess halls. The Thebans not only placed their professional men together in one living space, but

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<sup>116</sup> *Pelopidas*, 18.

also placed pairs of lovers together in the unit to ensure loyalty and courage in battle. The Spartans were so effective because they were professionally trained and drilled, and demonstrated an unshakeable sense of discipline in battle, such as during the confusion at Platea. The Thebans used pairs of lovers to do this. It is an important factor because discipline is a deciding factor in battle, especially hoplite battles, which focus on the use of the tightly packed phalanx. Maintaining discipline prevents breaches in the formation and thus can save lives in a battle.

The real advances in hoplite warfare that the Thebans provided comes, not from their creation of a professional force, but by the way in which that force was used in battle. The Battle of Leuctra marked a turning point in both the politics of Greece at that time, and in the way which heavy infantry were utilized in battle. The Spartans and their allies numbered 10,000 hoplites, including four of the six *morai* (1,800 Spartiates), and 1,000 cavalry. The Thebans and their allies numbered 6,000 hoplites, including the Sacred Band (300 men), and 800 cavalry.<sup>117</sup> The Spartans, though being numerically superior, really only held the advantage in infantry. The Theban cavalry was much more experienced and well trained than the Spartan cavalry. However, Thebes' allies attempted to flee the battle prior to its start but were prevented from doing so by the Spartan army.<sup>118</sup> It is clear that morale among Thebes' Boeotian allies was low. The Theban army was also heavily outnumbered. As a result, Epaminondas obliquely arrayed his army to the left, and placed the Sacred Band on the left wing, directly across from the Spartiates.<sup>119</sup> In doing so Epaminondas kept his allies far from the Spartan line, which prevented them from being immediately encircled by the larger enemy force, and thus crushing the spirits of an already

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<sup>117</sup> Arther Ferrill, *War: From the Stone Age to Alexander the Great* (Westview Press: London, 1997), 166.

<sup>118</sup> Ferrill, 166-167.

<sup>119</sup> Plutarch, *Pelopidas*, 23.

demoralized force. The Thebans themselves were also formed up “not less than fifty shields deep,” while the Spartans were “not greater than twelve men.”<sup>120</sup> The goal was “crushing the head of the serpent” in order to make the rest easy;<sup>121</sup> in other words if the Spartans were defeated their allies would flee. The Theban formation caused confusion among the Spartans themselves, who tried to extend their line out to their right in order to encircle the Thebans,<sup>122</sup> but were unable to because Pelopidas and the Sacred Band charged the Spartans as they were moving. The most confusion in the Spartan line was caused by the initial cavalry engagement though. The Spartans were well trained and drilled, and were thus used to changing formations and fighting without being thrown into confusion. However, the initial cavalry engagement was a disaster for the Spartans. Not only did their cavalry lose, but as they fled they crashed into their own hoplites.<sup>123</sup> The situation demonstrates both the importance of cavalry as well as professionalism. The Spartans were able to fight through confusion, and were even winning the battle at first,<sup>124</sup> because they were professional soldiers. Pelopidas was able to charge the Spartans while they attempted to change their formation and maintain his own formation. Again, displaying the importance of professional soldiers.

The Spartans were utterly crushed at Leuctra. After the Spartans were defeated in the battle, their allies fled too.<sup>125</sup> Since phalanxes normally lined up parallel to each other, Epaminondas’ oblique formation caused confusion among Sparta’s allies at the battle. It also allowed Pelopidas time to defeat the Spartiates, all while the allied contingents of both armies

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<sup>120</sup> Xenophon, *Hellenica*, 6.4.12.

<sup>121</sup> Anderson, 201.

<sup>122</sup> *Pelopidas*, 23.

<sup>123</sup> Xenophon, *Hellenica*, 6.4.13.

<sup>124</sup> Xenophon, *Hellenica*, 6.4.13.

<sup>125</sup> Xenophon, *Hellenica*, 6.4.14.



watched. This is an example of psychological warfare. The myth of the Spartans, even during their time, was enough to terrify an enemy phalanx. By watching them be utterly crushed the rest of the Spartan army gave up without even a fight, while the Theban allies were jubilant. The depth of Epaminondas' phalanx was also an innovation. The Thebans were accustomed to forming up in very deep formations,<sup>126</sup> however, it does not appear that it was normal to be "fifty shields deep." At Nemea the Thebans "failed to adopt the sixteen-deep formation but instead made their phalanx excessively deep."<sup>127</sup> It is clear that hoplite warfare did not consist of a pushing match between phalanxes, so the depth of the Theban formation had nothing to do with pushing weight. Xenophon's description of the Egyptian phalanx being 100 deep shows that greater depth had been used before, but he says that this was not useful because most of the men could not engage with their weapons. However, Epaminondas' depth had a twofold purpose. First, the deep formation made it easier to hide his forces behind the cavalry screen. As his cavalry moved forward to engage the Spartans' cavalry, Pelopidas lead the Thebans up right behind the cavalry<sup>128</sup> in order to surprise the Spartan phalanx. The greater depth of the Theban phalanx also eliminated the Spartans' numerical advantage. As the depth of a phalanx increases, its frontage decreases. This lowers the total number of hoplites who can engage each other. In order to gain the ability to envelope the deeper force the Spartans had to extend their own line so that they could maintain their order and formational integrity. The Spartans attempted to do this, but due to the confusion caused by the cavalry and the great surprise of Pelopidas' sudden attack, they were unable to do so.

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<sup>126</sup> Anderson, 209.

<sup>127</sup> Xenophon, *Hellenica*, 4.2.18.

<sup>128</sup> Ferrill, 168.

Epaminondas changed the way in which a phalanx could be used. He demonstrated that there was more to the tactics of heavy infantry than training, depth and frontage. However, the significance of Epaminondas and Pelopidas runs deeper than the tactical changes made. It was the turning point in which it became clear that a general could and should think critically about how to best use his forces, and think outside the box if that is what is necessary. Epaminondas demonstrated that he was able to apply principles of warfare in a different way, such as mass. Mass is the accumulation of forces in a specific area. Normally a phalanx attempts to evenly distribute its forces over a straight front, concentrating its best forces on the right. However, the Theban general massed his best forces in opposition to the enemy's, and most importantly, concentrated his efforts into one spot instead of along the whole line. Normally a hoplite army was defeated by breaking down its whole phalanx--commonly done by rolling up a flank. Epaminondas took a different approach. He had a clear goal to defeat his enemy most easily. By attacking and defeating the Spartans immediately he was able to defeat the whole enemy army. Once the Spartans lost the enemy broke. Epaminondas attacked the Spartan army's center of gravity. Marine Corps Doctrinal Publication 1: Warfighting, defines a center of gravity as "an important source of enemy strength."<sup>129</sup> Centers of gravity are things, both tangible and intangible, that a force cannot survive without; by destroying these things a force can be most quickly bent to another's will.<sup>130</sup> Critical vulnerabilities are vulnerabilities that, "if exploited, will do the most significant damage to the enemy's ability to resist."<sup>131</sup> Centers of gravity can also be critical vulnerabilities; however, they are not always one and the same. At Leuctra, the Spartiates themselves were both a center of gravity and a critical vulnerability. By recognizing

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<sup>129</sup> *MCDP 1: Warfighting* (United States Government as represented by the Secretary of the Navy, 1997), 46.

<sup>130</sup> *MCDP 1: Warfight*, 46.

<sup>131</sup> *MCDP 1: Warfight*, 47.

and acting upon this Epaminondas transformed Greek military thought from destroying the whole army in order to achieve victory, to destroying a key part of an army to force the collapse of the rest.

Pelopidas demonstrated the importance of a decentralized chain of command. Simply the fact that there is so much written about Pelopidas, a subordinate commander, during the great battles waged by the Thebans indicates that there was a shift from the leading commander of the army--whether a general of king, et cetera--having all the power in determining how a battle was decided. When forces are lined up parallel to each other, and the goal is to simply march forward, there are few separately moving parts. The cavalry, the skirmishers, and the main body of infantry is really what things boil down to. However, when an oblique formation is taken, combat power is concentrated to one particular area, and there is a combined arms attack along with the goal being speed and surprise, it is important that general's subordinate commanders are competent and reliable. Had Pelopidas not been an effective leader he would have led his men too far behind or too close to the cavalry, either giving the Spartans enough time to reorder themselves, or entangle his own men in the cavalry battle by mistake. But he did neither. Pelopidas was important, not because he was the brilliant strategist Epaminondas was, but because he was the leader of the Sacred Band, and a very effective one at that. He observed the situation and acted accordingly, resulting in an overwhelming Theban victory. Epaminondas was able to make a plan and convey it to Pelopidas, and Pelopidas was able to out his part of it while Epaminondas was able to direct the whole army. The use of subordinate commanders was not a new concept though. The Spartans had a thorough command structure in place for hundreds of years by the time of the Battle of Leuctra. However, the relationship between Epaminondas and

Pelopidas marks that subordinate commanders were to take on a much more important role in battle.

### **Chapter 3: Macedonian Domination**

All the infighting between Greece's major city states during the Fourth Century greatly weakened their ability to resist the conquests of Phillip II of Macedon and his son Alexander the Great, which ultimately led to the end of the independent *polis*. While Sparta, Athens, and Thebes slugged it out, Philip II united Macedon's highlands and lowlands, and then recreated the army to be highly mobile and professional, use a new equipment load-out, and placed an emphasis on cavalry. Philip also understood the importance of engineers, and so he began to gather up the best. Philip used his new army to consolidate Macedon's power against its Illyrian and Thracian neighbors, and then led his armies against Greece itself. Alexander the Great then used the army his father created to its fullest potential. He crushed the Persian Empire and marched to the edge of the known world.

#### **Logistics**

The logistic systems of Hellenic armies had made great strides in their ability to support operations farther and farther from home for longer and longer periods of time. However, these operations were largely confined to the Greek Peninsula. The Sicilian Expedition is a notable exception, as well as an example of the importance of Athens' navy to supply a military force so far from home.

#### **The Journey's Start**

The most important improvement made was to the way in which wagons and camp followers were regarded. Phillip had "forbidden" the use of wagons by the army, and only

allowed one servant for every ten foot soldiers and one for every cavalryman. These servants only carried hand mills and some other gear, the troops carried their own weapons, armor, utensils, and “some” provisions.<sup>132</sup> As mentioned above, Greek armies did use wagons and did have many servants and attendants accompanying hoplites. By cutting down on servants and other camp followers Phillip greatly decreased the mouths that needed to be fed. These followers would have been far less physically fit than the vast majority of Philip’s professional soldiers, so by forcing the troops to carry their own equipment, thereby cutting down on followers and, slowest of all, wagons, he increased the speed at which the army could move. When Xenophon marched through the mountains of Kurdistan he greatly reduced the baggage train.

As day was breaking, the Greek generals and captains came together and decided that on their march they would keep only those of the baggage animals that were necessary and most powerful and would leave the others, and that they would release all newly taken captives in the army; for the many baggage animals and captives were slowing down the march, and the many who were in charge of them were removed from the fighting. And they had to provide and carry double the provisions, since there were so many people.<sup>133</sup>

Xenophon and the other Greeks understood that wagons and servants and slaves made the march easier, but they also made it much slower. Xenophon notes that in order to have all these extra people with the army, the Greeks needed double the provisions, and they removed fighting men from the action. The Greeks were able to optimize their force for combat by releasing their captives and decrease the supplies they needed to bring along--all in all greatly increasing the speed of march. Philip simply codified this practice, while Xenophon and the 10,000 were forced to do so. Alexander the Great, when preparing to cross the mountains into India, “saw that his army was overburdened, its mobility impaired by its vast spoils.” As a result, he ordered all the

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<sup>132</sup> Donald W. Engels, *Alexander the Great and the Logistics of the Macedonian Army* (University of California Press: Berkley and Los Angeles, 1978), 12.

<sup>133</sup> Xenophon, *Anabasis*, 4.1.12-13.

wagons to be burned, “he burned his own wagons first,” and nearly all the soldiers even destroyed their own “superfluous goods.”<sup>134</sup> Alexander, who perfected the use of his father’s army, saw the negatives of wagons outweighing the good after marching and fighting all the way through the Persian Empire to India.

Wives and women in general were forbidden from accompanying Philip’s army on campaign, which was fine when the army was only marching to attack its neighbors since Philip regularly allowed the men to return home to see them. Alexander continued this practice until turning inland toward Mesopotamia, at which point it became apparent that no one would be returning home anytime soon.<sup>135</sup> The vast distance that Alexander had covered did not allow for ease of travel between the front and home. As a result, he allowed for his men to take wives in the lands being conquered. Engels remarks that “even if only one out of four soldiers took a wife, this would add many thousands of followers; and, of course, children would soon follow these unions, if they had not already.”<sup>136</sup> Being on campaign so far from home (a long-ranged expedition) created a conflict between logistical efficiency and the personal morale of the army.

Alexander the Great retained many aspects of the logistic system that his father had created. However, due to the nature of the conquest of the Persian Empire and beyond Alexander had to create a long-ranged supply system--the first one in the history of Hellenic armies. Since it was common practice in Greek armies to live off the land of the enemy and not the ally, Alexander had to account for bringing enough supplies to leave friendly territory. His march began in spring 334 BCE, moving from Macedon, through Thrace to the Hellespont. The spring was an especially hard time for subsistence farmers, which is what the Thracians were. They had

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<sup>134</sup> Plutarch, *Alexander*, 57.

<sup>135</sup> Engels, 12-13.

<sup>136</sup> Engels, 13.

no food to spare, as they did not even have enough food to maintain their own bodies. Because of this Alexander brought thirty days' worth of supplies for the army: the troops carrying a few days' worth of supplies at a time, then stopping in port cities to resupply via the ships Alexander stored supplies on.<sup>137</sup> This was a huge leap in methodology from simply carrying or buying all the needed supplies. Alexander was able to coordinate the movements of his navy through the Aegean and time the arrival of the ships and the army into port cities to resupply. The Athenian expedition to Sicily demonstrated that even one of the most advanced Greek army's the time--less than 100 years before Alexander--required a lot of naval support on expeditions that were so far from home and in hostile territory where living off the land and markets could be denied. Alexander, understanding this, ensured proper coordination between his fleet and the army. He did not have to take from his allies nor waste time trying to acquire supplies from the market since he already had everything on his ships.

Once the Macedonian army captured Miletus Alexander was no longer able to supply the army by sea in the same fashion. Alexander the Great was "short on money," and found his own fleet to be inferior to that of the Persians, and so "he was unwilling to endanger any portion of his forces."<sup>138</sup> He then had to acquire supplies from cities on the way. In the past, it was a regular practice to buy or take supplies from enemy cities. What separates Alexander's method of acquisition from past Greek armies, is that Alexander had to consider two things: the long duration of the marches the army would take before being able to acquire more supplies, and that he was conquering the people who he was buying or seizing supplies from. When the Spartans and the Athenians were fighting in Greece their campaigns lasted much longer than when

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<sup>137</sup> Engels, 27-28

<sup>138</sup> Arrian, *Anabasis of Alexander*, 1.20.1.

fighting neighbors, but they did not move thousands of miles from home. They also did not have to consider ruling the other Greeks, so it was possible to simply take what was needed with relatively few repercussions. Alexander was able to seize Persian baggage trains after defeating the Persians in battle,<sup>139</sup> and Alexander considered it a hostile act to not surrender immediately, leading to “special operations....to assure the army’s food supply.”<sup>140</sup> Areas that did surrender gave the army supplies through “gifts, requisition, or purchase by the troops at the market.”<sup>141</sup> The distinction is an important reflection of how Alexander’s goals affected the army’s ability to provision itself. Had he just been looking for plunder there would have been no need to buy anything.

An army with the size and speed of the Macedonian army can only carry so much at a time. Engels determined that the army Alexander the Great led could only carry three days’ worth of supplies at a time. For a four-day expedition the army required pack animals. But the army could not make it past five days, even on half rations with pack animals.<sup>142</sup> When supplies were running short Alexander forced rapid marches.<sup>143</sup> This was fine to a certain extent. Men and animals can only go so fast for so long. To shorten a journey by a day or two is reasonable, but to do so by more than a few days begins to enter the realm of impossibility. In order to cross large, barren swaths of land Alexander needed to be innovative by the standards of Greek armies. Alexander had magazines of supplies stashed along his intended route of march, which was important for even short expeditions through barren land.<sup>144</sup> Aside from Xenophon and the

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<sup>139</sup> Engels, 35.

<sup>140</sup> Engels, 41.

<sup>141</sup> Engels, 41.

<sup>142</sup> Engels, 35.

<sup>143</sup> Engels, 39.

<sup>144</sup> Engels, 40.



10,000, no Greek army had to consider where to find supplies or even be in the field for such a long period of time. The *poleis* of Greece were in almost constant state of war from the end of the Persian War until the reign of Alexander the Great, but fighting was mainly contained to Greece itself and the Aegean. Everywhere the Spartans and Athenians went there were supplies. The same applies to Epaminondas' Thebans. Alexander the Great had to cross deserts and barren mountains on marches that lasted for many days and weeks on end. Again, the logistic advancements made are the result of the needs of Alexander's goals.

### **Journey Into the Unknown: The End of the World**

After defeating Darius at Gaugamela, the role Alexander played changed. He could no longer be the benevolent liberator, conquering the oppressed areas under Persian rule. He then had to be the new ruler of all the lands the Persians once controlled. The unruly lands of the eastern edge of the Persian empire were not willing to accept Alexander the Great in the same way land west of Persepolis did. In order to provision the army, the Macedonians had to take what they needed by force and forage.<sup>145</sup> However, these lands were very arid and barren, and their people were largely nomadic--there were very, very few settlements in these vast, sparsely populated regions.

The problems faced in barren countries in the west pale in comparison to what Alexander now faced as he moved east. The solution was to split up the army: "The army would be divided into two or more units so that the diminished requirements of each unit could be more easily procured from the countryside. Either the different detachments would take separate routes through the country or the main army would be left at a base well provided with supplies while

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<sup>145</sup> Engels, 72.

Alexander advanced alone with light, swift units to subdue the region.”<sup>146</sup> This was only made possible by the extensive intelligence gathering effort employed by the great general--he received all information on the “roads, resources, terrain, and climate of the territory he was about to enter.”<sup>147</sup> Alexander, therefore, demonstrated incredible forethought in the way he approached moving a huge army across vast, barren distances. Alexander certainly had the most extensive intelligence network to be employed up to this point in time by a Hellenic army. Using the information gathered from his intelligence, the Macedonian army was moved in a highly flexible manner. But, dividing an army into smaller parts, while making it easier to supply, makes it much harder to coordinate and control. The simple fact that Alexander the Great was able to control his men and coordinate the movements of many officers at once demonstrates that he had a highly sophisticated communications system that allowed him to create a sophisticated logistic system. It also demonstrates that the Macedonian army adapted throughout its journey. Alexander did not split the army up as often or as far apart in the beginning of the war against Persia. By the time he and his forces reached Persepolis they had reached a level of mastery in the art of logistics and communication.

## **Religion**

As the king of Macedon, Alexander the Great was the chief priest of the Hellenic army he led. As a result, Alexander was the ultimate authority on all matters concerning the Gods. In this sense Alexander is no different than Sparta’s kings, or any general at the head of a Greek army. What really sets Alexander apart is the scope and scale of religious activity he conducted. There

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<sup>146</sup> Engels, 72.

<sup>147</sup> Engels, 71.

are numerous occasions throughout his numerous campaigns in which Alexander hosts fantastic festivals and sacrifices--all of which become more and more lavish as time goes on.

Alexander was able to control logistics through his ability to control when sacred times occurred and which omens were favorable--<sup>148</sup>which also impacted the morale and disposition of the army towards him due to the fun associated with sacred times and festivals, and the divine implications of favorable and unfavorable omens. Depending on the favorability of the omens Alexander would be able to control what the army did: stop, continue on, attack, make more sacrifices, set up camp, build things, and anything else the force might do. By being able to decide what times were sacred Alexander was able to hold festivals and competitions whenever he felt necessary. Festivals and games were huge morale boosts. The army got to partake in sacrifices and offerings, food and drinking, and competitions. Competition was also a significant aspect of Greek culture and was a way for the men to prove their manliness. So, the competitions sometimes acted as a way in which the Greeks and Macedonians were able to show off to themselves and their allies.

Both festivals and competitions were costly, though. They required a tremendous number of resources:<sup>149</sup> food, water, wine, money, and more than anything, time. Each time Alexander decided to hold a sacrifice or festival or competition, he had to decide whether or not the benefits outweighed the costs of doing so. As King Alexander, he was expected to perform sacrifices for the army on numerous occasions: such as before battles, and at river crossings, as well as provide rewards for his companions; and he was expected to provide and perform sacrifices for the conquered peoples' gods—which included building shrines, statues, and altars as well as

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<sup>148</sup> F.S. Naiden, *Soldier, priest, and god : A Life of Alexander the Great*. New York, NY : Oxford University Press, 2019., 40.

<sup>149</sup> Naiden, 2019, 39.

promises to suppliants.<sup>150</sup> The monetary cost alone was staggering. For example, after Alexander's death Perdiccas found plans to build six temples around Alexander's empire, each at a cost of 315 ton silver, as well as a temple at Troy that was to be larger than any other temple--which would have cost considerably more.<sup>151</sup> Then factor in the cost to feed the sacrificial animals that had to be brought on campaign, the time it took to move them, the time it took to perform all the rituals and festivities, food, water and wine required for the army, it was a lot. The question of acquisition of sacrificial animals is also raised. It would have been nearly impossible to bring all the animals required from Macedon, requiring Alexander to purchase, seize, or be gifted animals for use--all of which could occur depending on the level of resistance offered by a city or town, or how much cash Alexander would have spread as a gift himself.

Through his power as chief priest Alexander the Great controlled the movements of his army. Surely there were those in his army that wanted to press the advantage of the army after victory at the Granicus River, but by holding funerals at the Granicus River<sup>152</sup> he was able to delay the army, giving himself time to properly plan for logistics and battle. It was no coincidence that Alexander stopped in Gordion to undo the famous Gordian Knot. Doing so served a dual purpose: to gain Alexander further legitimacy as a ruler and reverence from the men of the army, and to delay the army while the harvest ripened. Both Arrian and Quintus Curtius report that Alexander--upon hearing of the legend that whoever undid the Gordian Knot would become king of all Asia--went to undo the knot, and cut it with a sword, undoing it--Arrian provides an alternate explanation: the King pulled out the center peg.<sup>153</sup> Diverting from

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<sup>150</sup> Naiden, 2019, 38.

<sup>151</sup> Diodorus Siculus, *The Library of History*, 18.4.4-5.

<sup>152</sup> Arrian, 1.16.6.

<sup>153</sup> Arrian, 2.3.1-7; Quintus Curtius Rufus, *History of Alexander*, 3.1.14-18.

his course of conquest in order to fulfill this prophecy had obvious motivations to bolster claims to Persian territory. The Gordian Knot was tied by a man named Gordius, the father of King Midas. By undoing the knot Alexander claimed a token of “royal heritage.”<sup>154</sup> Alexander was justified in fulfilling the prophecy due to its connection with Macedon. On a greater scale than Alexander, the Macedonians as a whole were connected to the prophesied conquest of Asia. It also must have greatly increased the army’s faith in Alexander, especially after the numerous victories they had just been through. Alexander would have further strengthened his control over the army’s course and logistics too, since he had again proven that the detour was not a waste. At the same time the events of the Gordian Knot transpired farmers were getting ready to harvest their crops. The army left Gordion “much before late July,” and the harvest season begins in late July, early August. Engels argues that by leaving when they did, Alexander simplified the army’s problem of acquisition, since, by arriving after the crops had been harvested, the army would not have to do it itself.<sup>155</sup> Many such instances of Alexander using his power as chief priest to manipulate the politics within the army to get what he wanted, whether for strategic or personal reasons.

## **Strategy**

The way in which war had been fought by Hellenic armies had been evolving to become more and more complex. Hoplites became lighter to be able to cope with light infantry and skirmishers, which, along with cavalry, had been integrated into Greek armies. Xenophon understood the importance of using skirmishers and cavalry while he and the 10,000 retreated from the Persian heartland, and Epaminondas began to employ traditional hoplites in non-

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<sup>154</sup> Munn, 2008, 110.

<sup>155</sup> Engels, 37.

traditional ways. Phillip II of Macedon and his son, Alexander the Great, took these principles and brought warfare in the Hellenic sphere to its pinnacle.

### **New Goals**

The goals and motives of warfare changed forever when Phillip II began to lead his new army against the Greek city-states. In the past Greek cities fought each other over honor and manliness, then over hegemony over each other--Sparta and Athens during the Peloponnesian War, and later Thebes along with them during the fourth century--but Philip sought outright conquest. He first subdued his barbarian neighbors in Illyria, Thrace and Paeonia, and convinced them to all join him.<sup>156</sup> He then used the Sacred War to expand his kingdom through not only his “achievements but also through his reverence toward the god” (i.e. Pythian Apollo).<sup>157</sup> Had Philip not sought conquest, he would not have recruited the Illyrians, Thracians, and Paeonians as his allies. There would have been no need to force them into fighting for him if he did not foresee warfare in the near future. These allies helped him to defeat the Phocians in the Sacred War, which Philip used as an excuse to expand his land and influence. It could be argued that Philip aided the Pythia out of reverence as a good Hellene; however, after defeating Onomarchus<sup>158</sup> marched to “put an end to the tyranny in Pherae, and, after restoring its freedom to the city and settling all other matters in Thessaly, advanced to Thermopylae, intending to make war on the Phocians.” But “the Athenians prevented him from penetrating the pass.”<sup>159</sup> Philip’s actions after his victory in the Third Sacred War demonstrates that the king fully intended to make himself master of all the Greeks. That is because marching south into Thessaly

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<sup>156</sup> Diodorus Siculus, 16.22.3.

<sup>157</sup> Diodorus Siculus, 16.38.2.

<sup>158</sup> Leading general of the Phocians during the Third Sacred War.

<sup>159</sup> Diodorus Siculus, 16.38.1-2.

and attempting to pass through Thermopylae were very aggressive acts. They had nothing to do with the domestic matters of Macedon, and only related to the Sacred War by the campaign being against the Phocians. However, marching to Phocus was not the mission of the war--it was to save Delphi. Eventually Philip II becomes “the leader of all Greece” by establishing the League of Corinth and being selected as *strategos* of all the Greeks, except the Spartans, for his upcoming war with Persia.<sup>160</sup> With this Philip outright conquers Greece.

Alexander the Great was awarded the same honors as Philip was after putting down rebellions in Greece, and was even granted “honors even greater than those granted to Philip,” by the Athenians.<sup>161</sup> By putting down rebellions in Greece--most notably plundering and razing Thebes, killing more than 6,000 Thebans and selling 30,000 into slavery--<sup>162</sup> Alexander was not acting as a peer or a simple hegemon, but as an outright and total ruler. Alexander continued his conquests as he moved through the Persian Empire, where it is clear that he was attempting to integrate the land he conquered into a larger empire. For example:

Alexander appointed Kalas to serve as satrap of the land Arsites ruled, and ordered the same tribute to be paid as had been paid to Darius. He then commanded all the barbarians who had come down from the mountains and voluntarily submitted to him to return to their homes....Alexander now proceeded to Sardis....Mithrenes, the commandant of the citadel, came to him with the town's reading citizens. These men surrendered the city, as Mithrenes did the citadel and the treasure....Thereafter he kept Mithrenes with him in a

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<sup>160</sup> Diodorus Siculus, 16.89.

<sup>161</sup> Arrian, 1.1.3.

<sup>162</sup> *Alexander*, 11.

position of honor, and permitted the citizens of Sardis and the other Lydians to keep their ancient customs, and even granted them their freedom.<sup>163</sup>

But to those cities that resisted, Alexander showed no mercy. Tyre resisted Alexander stoutly: “Nearly eighty thousand Tyrians perished....Alexander granted amnesty to all who fled to the shrine of Herakles, a group that included a number of Tyrians who held high office....and some ambassadors from Carthage....He enslaved all the others: some thirty thousand Tyrians and foreigners were caught and sold.”<sup>164</sup> The contrast in the way that Alexander the Great treated those that surrendered to him immediately, and those that did not is black and white. He wanted the various people he came across to recognize him as a ruler rather than a passerby who they would just have to survive--hence the granting of freedom, appointing of local rulers, and the taking of tribute rather than simply plundering the cities and lands. After his final victory over Darius at Gaugamela, Alexander was “proclaimed king of Asia,”<sup>165</sup> and “On becoming master of Susa, Alexander came into possession, in the palace, of forty thousand talents of coined money and all the other trappings of untold wealth.”<sup>166</sup> Susa was the principal capital of the Persian Empire as well. So by seizing Susa and seizing all the wealth of the treasury after being proclaimed king of Asia by his own men Alexander demonstrated that he fully intended to rule over the Persian Empire. This point is further emphasized when Alexander began adopting the ways of the Persians and teaching the Persians the ways of the Greeks and Macedonians, which, according to Plutarch, was to create cultural bonds of “assimilation and fellowship--by good will

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<sup>163</sup> Arrian, 1.17.1-4.

<sup>164</sup> Arrian, 2.24.4-5.

<sup>165</sup> *Alexander*, 34.

<sup>166</sup> *Alexander*, 36.



rather by force,” in order that it would make it easier to rule when he was not actively in Asia.<sup>167</sup>

Alexander even married Rhoxane,<sup>168</sup> the daughter of a Bactrian chieftain, in order to bring the Bactrians into the folds of the empire much more easily. Marriage has been a very useful tool for politics and empire building all throughout human history. Hence Alexander’s marriage to Rhoxane. Alexander also married Darius’ eldest daughter, Barsine, as well as Parysatis, Artaxerxes’ youngest daughter--thus securing marriage to both the official Persian royal bloodlines--and married off many of his officers to Persian noble women. He even gave all his men--around 10,000--who had married Persian women wedding gifts.<sup>169</sup> Alexander progressively ramped up his attempts to demonstrate his plan to rule the Persians and assimilate them into a larger Macedonian Empire, until he was outright recognized as the King of Kings and the King of Macedon, hegemon and ruler of the Greek city states.

### **Equipment**

Philip II’s most important contribution to the new age of Hellenic warfare was the new way he equipped and trained his phalanx, making his army a professional military force in the process. The military of a state tends to be conservative and resistant to change, especially its proudest units. Luckily for Philip Macedon relied on cavalry for its military prowess, not the hoplite phalanx. Macedon’s aristocrats were trained as horsemen from youth.<sup>170</sup> As a result the infantry was likely fairly easy to re-equip. The hoplite became the phalangite: a warrior which wore metal cuirasses, helmets, greaves and carried a shield two feet in diameter, though the rear ranks may have been much more lightly armored. Philip’s phalangites, most notably, carried the

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<sup>167</sup> *Alexander*, 47.

<sup>168</sup> *Alexander*, 47.

<sup>169</sup> *Arrian*, 7.4-8.

<sup>170</sup> *Ferrill*, 176-77.

*sarissa*, a pike joined by a metal sleeve<sup>171</sup> that was between fifteen and eighteen feet long.<sup>172</sup>

Since both hands were needed to wield the *sarissa* the shields used were either strapped to the arm or hung around the neck to free up both hands. The result of these changes in equipment was a nearly impenetrable wall of spear points as opposed to the shield wall created by hoplites.

Phalangites needed three feet of space between the men to their left and right in order to wield their massive *sarissai*.<sup>173</sup> Each man behind was pressed into the man in front in order to allow for the first five ranks to have their spear points protrude out in front of the phalanx.<sup>174</sup> The men in the ranks six through sixteen kept their *sarissai* pointing up at an angle over the men in front of them “so as to protect the whole formation from above, keeping off by this serried mass of pikes all missiles which, passing over the heads of the first ranks, might fall on those immediately in front of and behind them.”<sup>175</sup> The main weapon of the phalanx changed the way in which the formation functioned. In order to make such a long spear effective a dense mass of men must all wield it in the same direction, just like a traditional hoplite phalanx. However, while the hoplites needed to be laterally close, phalangites needed to be as close as possible in all directions, especially vertically, in order to create an impenetrable defense with their weapons. When Philip created the Macedonian Phalanx he envisioned something out of the Trojan War. “Indeed, he devised the compact order and the equipment of the phalanx, imitating the close order fighting with overlapping shields of the warriors at Troy, and was the first to organize the Macedonian phalanx.”<sup>176</sup> Diodorus credits the new phalanx to Philip II of Macedon, and gives a description of

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<sup>171</sup> The pike was split into two pieces to make it easier to carry on the march.

<sup>172</sup> Minor M. Markle III, “The Macedonian Sarissa, Spear, and Related Armor” *American Journal of Archaeology* (Archaeological Institute of America: <https://www.jstor.org/stable/503007>, 1977), 323.

<sup>173</sup> Polybius, *The Histories*, 18.29.2-4.

<sup>174</sup> Polybius, 18.29.6.

<sup>175</sup> Polybius, 18.30.3.

<sup>176</sup> Diodorus Siculus, 16.3.2-3.

how it was supposed to be, very compact. Polybius confirms the description when giving the Homeric quote “Spear crowded spear, Shield, helmet, man press’d helmet, man, and shield; The hairy crests of their resplendent casques Kiss’d close at every nod, so wedged they stood.”<sup>177</sup> The new weapon also created a defense that hoplites did not have; the long spears from the rear provided cover from projectile weapons. By implementing the *sarissa* Philip amplified the greatest strength of the phalanx, its power and impenetrable nature from the front. By the same token he also amplified the greatest weakness of the phalanx, its lack of mobility, which makes it vulnerable to the flank and rear. Due to the first five ranks of men having their weapons leveled all the men would have been bound by the spears of all those around them, making lateral movement impossible, and with all the men from behind pushing on top of it movement in general would have been impossible in any direction other than forward. Even any attempt to turn left or right while staying in the same position would fail because the long *sarrisai* would simply hit everyone in the attempt. As a result of the unwieldy nature of the Macedonian Phalanx, it was necessary to drill the men rigorously. Philip “held constant maneuvers of the men under arms and competitive drills.”<sup>178</sup> Even by Philip II’s day and age only Sparta had ever had a true professional military. The Thebans had their Sacred Band, but that was one unit out of an army of unprofessional hoplites. Philip created a professional military force. The training the men went through gave Philip the same advantages the Spartans had over the other Greeks for hundreds of years--only Philip had the money and the manpower to fuel a war machine of his size.

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<sup>177</sup> Polybius, 18.29.6.

<sup>178</sup> Diodorus Siculus, 16.3.1.

Macedon was not a *polis*. Rather it was an *ethnos*.<sup>179</sup> An *ethnos* is an area that may or may not contain *poleis* and other urban centers. The population is identified as part of an ethnic group or as regional residents rather than from a *polis*. The large region that comprised Macedon gave Philip access to manpower and resources to fuel his new army, which was expensive to equip. Hoplites were responsible for their own equipment. Philip provided the Macedonian army with their arms and armor, which required money that city states did not just have immediately in their own territory--silver/gold mines need to be seized or used in a colonized/allied territory by a *polis*. Macedon, however, was rich in silver, making it much easier for Philip to afford the equipment for his men. The helmet and metal cuirass would have been expensive, but necessary, to provide. As already discussed, the *aspis* carried by hoplites provided ample protection for the user. It was also the only piece of gear that was completely necessary for the integrity of the phalanx. Other pieces of armor were, therefore, unnecessary except for the user's own protection. Phalangites did not have such protection provided by their shields. The two-foot diameter shields used by Philip's soldiers were very small because a heavier shield would have made the already difficult to use *sarissa* completely unusable.

Phalangites would have depended far more on their helmets and cuirasses to protect them. It is clear that the cuirass worn was a metal one, looking much like that worn by pre-Persian War era hoplites. The Alexander Sarcophagus displays a Macedonian warrior, the one closest to Alexander himself, killing a Persian. The warrior has the classic open face helmet with a forward sloping crest, and a solid line at the top of his arm, indicating body armor.<sup>180</sup> Looking

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<sup>179</sup> Johnathan M.. Hall, *A History of the Archaic Greek World: ca. 1200-479 BCE Second Edition* (Oxford: Blackwell Publishing, 2014), 92.

<sup>180</sup> Figure 13.

at the scene from the Tomb of Lyson and Kallikles,<sup>181</sup> interior entrance, it is clear that body armor was fitted much like the linothorax in that it had shoulder straps that attached to the upper chest. The color of the armor is a light brown, while the helmet above is clearly a dark bronze. Therefore, the armor is likely leather or some other light material.<sup>182</sup> The scene of the armor dedication in the tomb shows, very clearly, the open face of the helmets and the cheek pieces. The left helmet also has the forward sloping horn-like structure that would have served to further protect the wearer from blows to the head. The colors of both are also representative of bronze. In between the helmets are a pair of bronze greaves, confirming that greaves were worn.<sup>183</sup> Personal protective armor was standard in the army which Philip created because it was necessary for the survival of the soldiers.

Phalangite armor was certainly lighter than that of hoplites of the Persian War and the Peloponnesian War. Hoplites began wearing linen cuirasses, but more commonly no armor at all in the later period. Philip found a much better middle ground for the level of armor being worn. The helmets of Philip's Macedonians were much lighter and allowed the wearer to see and hear much more than the closed off Corinthian style helmet. The body armor was also lighter than that of Classical hoplites. The biggest point of difference in the weight of the equipment was the shield though, which, being much smaller and less deeply dished than the *aspis*, and lacking the metal armband, had to be more than half as light. *Sarissai*, which weighted 14.5 pounds<sup>184</sup> rather than a spear of only 2.2 pounds,<sup>185</sup> was the only piece of gear that weighed more than its hoplite equivalent. The equipment followed the trend that had been taking place in Greek warfare since

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<sup>181</sup> 2nd Century BCE tomb in Lefkadia, Macedonia.

<sup>182</sup> Figure 14.

<sup>183</sup> Figure 15.

<sup>184</sup> Markle, 324.

<sup>185</sup> Markle, 325.

around the time of the Persian War, it became lighter. It had been necessary for this trend to occur in order for hoplites to cope with the introduction of light infantry, cavalry, and skirmishers. By using the *sarissa* it became impossible for the phalanx to effectively combat light infantry on its own, but the weapon was also already heavy and difficult to use; so phalangites had to wear light armor in order to use the long spear.

The one exception to the change in heavy infantry in the Macedonian army were the *hypaspists*. Under Alexander these men were armed in the traditional hoplite panoply: using the *aspis*, dory, sword/dagger, a cuirass, helmet and greaves.<sup>186</sup> Obviously the helmet and cuirass would have been modern by the day's standard, and would have still been lighter than their predecessors from well over 100 years prior. By using the traditional hoplite panoply the *hypaspists* were more mobile than the phalangites since they did not have the *sarissa* to impede movement. The equipment of these men allowed Alexander to use them to protect the main phalanx which could not turn nearly as easily. At Issus Nicanor son of Parmenion commanded the *hypaspists* and *agema*<sup>187</sup> on the extreme right wing of Alexander's line.<sup>188</sup> Arrian describes the "battalions from the right wing" being victorious over the Persians and routing them. They then "wheeled about toward Darius' foreign mercenaries, where the Macedonian center was in distress, and drove them back from the river. Having outflanked the breached Persian line, they charged into its side and started cutting down the mercenaries"<sup>189</sup> It is clear that the *hypaspists* and *agema* were able to move and maneuver quickly due to their equipment, and could therefore serve a specific purpose.

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<sup>186</sup> Markle, 329.

<sup>187</sup> An elite corps of light infantry. There was also a cavalry *agema*.

<sup>188</sup> Arrian, 2.8.3.

<sup>189</sup> Arrian, 2.11.1.

## **Tactics**

Macedonian phalangites were much more lightly armored than their hoplite predecessors, which led to Philip making the phalanx sixteen men deep. By adding more men and more mass he was able to capitalize on the advantages of the pike and effectively make his phalanx heavier<sup>190</sup> than that of the hoplites. Philip changed his science (equipment) to match the art of war in this sense. Greek warfare had progressively started to become more and more integrated with units that were not heavy infantry. Light infantry wreaked havoc on hoplites of the Peloponnesian War, Xenophon and Iphicrates<sup>191</sup> demonstrated the importance of cavalry and skirmishers accompanying hoplites, and Epaminondas showed how a deeper formation and tactical innovation can be decisive factors in a battle of heavy infantry. From all these sources Philip II learned and adapted his army to accommodate all the best aspects of each type of infantry and cavalry seen in the Greek world to that time. Unlike hoplites, phalangites were not expected to win a battle all on their own. They were meant to pin the bulk of an enemy's force in place “while Macedonian cavalry and light infantry penetrated gaps or hit flanks rear.”<sup>192</sup> This was the birth of the hammer and anvil tactic. The phalanx acted as an immovable anvil that more mobile troops, such as the cavalry, acting as the hammer, smashed the enemy into. For the first time since the advent of the hoplite the main effort of the army was not the heavy infantry. Rather, it was Macedon’s cavalry that delivered the decisive blows in battle. The *Hetairoi*, or Companion cavalry, were the elite wing of Macedonian heavy cavalry. They fought out of a wedge formation--that was used to penetrate gaps in the line as well as flank movements--and

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<sup>190</sup> Heavier does not mean the actual weight of the phalanx. Hoplites did not engage in a pushing match, and phalangites absolutely did not either. The weight of the formation refers to its total offensive and defensive capabilities due to the weapons and armor used.

<sup>191</sup> An Athenian general who is famous for his integration of skirmishers into hoplite warfare.

<sup>192</sup> Ferrill, 178.

were armed with a 9-foot, 4.2 pound cavalry *sarissa*.<sup>193</sup> The Thessalians provided additional heavy cavalry, though they did not use spears as heavy as the *sarissa*. They fought out a diamond shape in order to give greater mass and weight to the point of the formation as well as make the width wider at its greatest extent.<sup>194</sup> In addition to the heavy cavalry Philip also had lighter cavalry in the form of the Thracians, Scouts “(probably from Macedonia but not Companions),” and Paeonians. They were all armed with the javelin, with the exception of the Scouts who used lances, and were used to conduct reconnaissance and for skirmishing.<sup>195</sup> Such diversity in cavalry was unheard of in a Greek army prior to the advent of Philip’s reforms. Peltasts (light infantry) and skirmishers, both of which had been integrated into Greek armies prior to Philip, found a new degree of importance in his highly integrated army. Peltasts were able to play the role of light infantry and skirmisher. Skirmishers were generally archers and slingers, and could not hold a line of any sort--their purpose was to harass enemy formations before the start of battle, “in the hope of demoralizing or confusing him,” or to attack an enemy column on the march. Mounted archers also served as cavalry skirmishers.<sup>196</sup> Skirmishers were highly mobile and were clearly not meant for sustained combat. Their harassing actions would have caused a tremendous amount of frustration for enemies, especially heavy infantry who had no hope of catching them. They served as one more problem to deal with in combat, and as a spying nuisance outside of battle. While skirmishers served in a supporting role, which light infantry also used to exclusively play, light infantry units began to play decisive roles. Certain light troops such as javelin men could serve as skirmishers to provide medium ranged fire support but

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<sup>193</sup> Ferrill, 176.

<sup>194</sup> Ferrill, 177.

<sup>195</sup> Ferrill, 177.

<sup>196</sup> Ferrill, 179.



could also use their weapons to hold a line. Light troops were used to follow cavalry rushing gaps that opened up in a line of heavy infantry in order to sow chaos and confusion. They were able to do so because they were far more mobile than heavy infantry. Light infantry were also able to hold a line against cavalry, and heavy infantry on “difficult and mountainous terrain.”<sup>197</sup> Philip had begun to exploit light infantry units to their fullest potential. This is a response to the developments in Greek warfare up to that time, as well as the circumstances of Macedonian warfare. Greeks began to understand that heavy infantry could only do so much on its own. As a result, non-hoplite units were attached to the army, but did not function as a part of a whole. Rather they were an attachment that operated on the peripherals of the main engagement of the hoplites. But because Macedonians were horsemen, not hoplites, they did not have such a tradition of heavy infantry focus. That is why Macedonian hoplites were much weaker than those of the *poleis*. Macedon had to change its heavy infantry, and it had to seamlessly integrate cavalry, skirmishers, and light infantry into the army--with each being a part of a whole--in order to survive and come to prominence. And while Philip may have created the army and began using these tactics, Alexander the Great perfected them.

### **Composition**

When Alexander left for Asia he left with “not more than thirty-thousand, his cavalry not more than five thousand.”<sup>198</sup> This army was very diverse--possessing both heavy and light infantry and cavalry as well as skirmishers, making it far more complex than any preceding Hellenic army. Not long after crossing into Asia Alexander faced the Persians at the Granicus River, where Arrian gives the various units present. On the right wing were the *Hetairoi*, the

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<sup>197</sup> Ferrill, 179.

<sup>198</sup> Arrian, 1.11.3.

archers, and the Agrianian javelin men under the command of Philotas son of Parmenion. Next to them was Amyntas son of the *sarissa*-armed cavalry, the Paionians, and Socrates' cavalry<sup>199</sup>--which was a squadron of "Companions from Apollonia."<sup>200</sup>

Next came the shield bearers under the command of Nikanor son of Parmenion. Then came the phalanx of Perdikkas son of Orontes, then that of Koinos son of Polemokrates; that of Krateros son of Alexander; that of Amyntas son of Andromenes; and finally that of Philip son of Amyntas. On the left wing, the Thessalian cavalry, led by Kalas son of Harpalos, was stationed first. Then came the allied cavalry under the command of Philip son of Menelaos, followed by the Thracians under Agathon. Next came the infantry of Krateros, Meleagros, and Philip, which extended to the center of the entire line.<sup>201</sup>

It is clear that Alexander used every type of soldier available to him at that time. The army was a great mix of infantry, cavalry, and skirmishers. There were clearly more light infantry and skirmishers than there were heavy infantry. In hoplite armies the place of honor was the rightmost of the formation. And even though it still is under Alexander, the rightmost is reserved for more mobile units than his elite phalangites. The phalanx, being weak on the flanks and rear, is located in the center of the formation so that it can be protected by faster moving units, as well as act as the immovable anvil that the rest of the formation can depend on to hold fast. Directly next to the center of the formation were the next heaviest units like the *hypaspists* and the Greek allies. Cavalry would either be used as a screen, as it was at the Battle of Leuctra, or be placed on the wings. Here Alexander places them on the wings. What is most different from prior Greek formations is that Alexander mixes his light infantry and skirmishers among

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<sup>199</sup> Arrian, 1.14.1.

<sup>200</sup> Arrian, 1.12.7.

<sup>201</sup> Arrian, 1.14.2-3.

the cavalry on the wings. They are light enough to move anywhere on the battlefield in order to support the phalanx, as well as assist the cavalry. They are not treated as having a completely separate function. They are not simply supporting units, they are working *with* other units. As Alexander marched through Asia “he encountered and incorporated into his own army many different forces and types of units.”<sup>202</sup> Whether this was Sogdian<sup>203</sup> or Bactrian<sup>204</sup> cavalry, both of which were excellent light cavalry, or even war elephants,<sup>205</sup> which he had only met for the first time weeks prior.

Another key development to Greek warfare made by Philip and Alexander was siege craft. Dionysius I of Syracuse was the first to make serious innovations to Greek siege warfare (in the form of the catapult),<sup>206</sup> but Philip and Alexander made it a standard of Greek warfare. Philip began integrating engineers and siege weapons into his army, which made it so good at sieges that Athens’ border fortresses could not slow his advance.<sup>207</sup> Alexander greatly improved upon these techniques, even using catapults and other siege weapons as artillery against infantry.<sup>208</sup> In order to adapt to the times it was necessary to be able to effectively conduct sieges as well as understand the capabilities of artillery since it was one more tool available to commanders. Sparta spent over a year besieging Athens, Alexander spent months at Tyre. In order to win and prevent prolonged sieges like the Spartans had, Greeks and Macedonians had to become proficient at the art as well as obtain the various engines of the siege.

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<sup>202</sup> Graham Wrightson, *Combined Arms Warfare in Ancient Greece: From Homer to Alexander the Great and his Successors* (Routledge: New York, 2019), 178.

<sup>203</sup> Arrian, 3.28.10.

<sup>204</sup> Arrian, 5.12.2.

<sup>205</sup> Arrian, 5.21.2.

<sup>206</sup> Ferrill, 173.

<sup>207</sup> Ferrill, 174.

<sup>208</sup> Wrightson, 185.

Another key feature of Alexander the Great's army was how the command was broken up. Alexander divided his army into ethnic contingents which were then commanded by trusted individuals. Doing so maintained unit cohesion and prevented ethnic rivalries from disrupting the effectiveness of the unit. This was a common practice in Greek armies even going back to the Persian War; however, Alexander placed Macedonians in charge of those units. Another important factor of having subordinate commanders was that it simplified the process of controlling the army. Alexander led the right wing at the Granicus, while Parmenion led the left.<sup>209</sup> Parmenion understood Alexander's intent and executed it. In the meantime, each wing had its own commanders under the king and his general. Each was able to give orders to individuals who would then pass those down to their commanders and the units. Being able to effectively coordinate each of the various units' movements was certainly the most difficult job for Alexander once the battle had begun. Yet he could do it.

### **Alexander the Great**

The single greatest advantage that Alexander the Great's army had over the Persians was Alexander himself. Even though he embodied the ideal general by Greek standards, he was very different from past leaders. Greek generals were expected to lead from the front, like Leonidas and Epaminondas. Greek generals were the chief priests of their armies, especially when they were also political leaders like Sparta's two kings. Greek generals came up with the plan, ensured the logistics, and executed it. Alexander did all these things. What makes him special was his ability to think outside of the box and his ability to keep track of all the moving parts of his army. Alexander the Great is arguably the greatest military leader in world history for a

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<sup>209</sup> Arrian, 1.14.1.

reason. He established what near perfection looked like. It was not just a one-off thing that Alexander was so great; it was a necessity. In the past all a general had to keep track of was really the phalanx--everything else was extemporaneous and did not affect the outcome of the battle in the same way the phalanx did. However, Alexander had many units to keep track of because they were all vital for the survival of the army as a whole. It is clear that this was a very difficult thing to do. During the Battle of Leuctra, the Spartan cavalry screen fell into disorder and ran into the Spartan phalanx, causing excess chaos and disorder. Part of the issue in controlling a combined arms force as opposed to, what Wrightson terms a diverse army,<sup>210</sup> is that the various different troops must be trained extensively so that they are used to working with each other instead of just supporting each other. Philip and Alexander both drilled their armies extensively. For example, the phalanx was trained “to face in any direction by wheeling in an arc. By stepping the last eight men in the files right or left, and moving them up, Philip could double the front of his phalanx on command, or conversely, create gaps as Alexander did at Gaugamela for the Persian chariot charge.”<sup>211</sup> Such a well trained army would be able to do certain things automatically. Resultantly, commanders in Alexander’s army, including himself, were able to focus their attention on more important things such as which wing needed support or where the gaps were.

Alexander demonstrated that he was able to think big picture and think many steps ahead of his enemies even in the heat of battle. At the Granicus Alexander was able to adjust his formation on the move: “Alexander himself, leading the right wing to the sound of war trumpets and the men raising their cry in honor of Enyalios, entered the stream. As he went he kept

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<sup>210</sup> Wrightson, 171.

<sup>211</sup> Ferrill, 178.

stretching out his line diagonal to the direction of the current, so that the Persians might not attack the head of his column as he climbed out of the river.”<sup>212</sup> Alexander took into account two things to perform this maneuver: the fact that he was vulnerable to being outflanked by the Persians if he tried to march straight through the river, and the fact that the current of the river was a force that would affect the army’s movement. He used the current of the river to help stretch out his line, making it a more natural movement for the men to make, and protected his flank. Had he stretched the line out prior to beginning his movement he would have given the Persians time to fix their formation to counter his own. He also would have needed the foot soldiers and horses to march straight across which would have both caused extra fatigue and would have broken up the formation, causing gaps in the line and leading to defeat. By personally leading the charge Alexander continued the Greek tradition of leading from the front. By invoking Enyalios--an aspect of Ares--he also performed his duties as the chief priest and boosted the morale of all those who could hear him.

Alexander was also a personality and a brilliant politician. Epaminondas and Leonidas were both personalities in their own armies and to the other Greeks. Both lead from the front and had unique aspects that endeared them to their men. Epaminondas was brilliant and inspired confidence in the Thebans. Leonidas was not only one of Sparta’s kings, but also went through the *agoge* as a boy, which greatly pleased the Spartiates--they all had shared suffering together. These aspects were very important to leading men. Successful generals were all personalities as well as leaders. Alexander took this to the extreme and purposely exploited it to endear his men to him. The massive games and festivities Alexander held at Soloi<sup>213</sup> are an excellent example of

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<sup>212</sup> Arrian, 1.14.7.

<sup>213</sup> Arrian, 2.5.8.

Alexander endearing his men to him. In doing so Alexander also gained political power. He was the king after all, that was an important consideration to make. Had he allowed some other of his generals to become more favorable with the men it would have put his own power in question and weakened his authority in the army and at home. If that had happened, he would not have been able to push his army so hard and so far from home. This was not a new problem that Greek generals had to face. Epaminondas was prosecuted multiple times by his enemies in Thebes,<sup>214</sup> as was Alcibiades by his enemies in Athens.<sup>215</sup> Alexander's campaign in Asia, like many other aspects of command, emphasized this aspect of being on campaign. Losing authority with the army in Asia would have led to loss of authority and power in Macedon. Not only did Alexander have to play politics in his own army, among his own people, he had to do the same with local people he conquered who did not share his culture. Fuller points to the aftermath of Gaugamela as an example of Alexander's political genius. He appointed Mazaeus<sup>216</sup> the satrap of Babylonia. By doing so Alexander placed a Persian in charge of ruling Persians for the first time. It was an attempt to begin unifying the various people of his empire, including the Greeks and Macedonians, as well as encourage the satraps who were still loyal to Darius to defect.<sup>217</sup> Both these considerations were new for a Hellenic general. Greeks did not rule over vast lands of non-Greeks. Even the Kingdom of Macedon only had semi-Hellenic peoples under its control. Alexander thought of how-to bring others together through peaceful methods, rather than focusing on Hellenic culture and ignoring everyone else. He also further legitimized his rule over

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<sup>214</sup> *Pelopidas*, 25.

<sup>215</sup> Plutarch, *Alcibiades*, 19.

<sup>216</sup> Commander of Darius' right wing at Gaugamela.

<sup>217</sup> J.F.C. Fuller, *The Generalship of Alexander the Great* (Rutgers University Press: New Brunswick, 1960), 109.

the Persian Empire by bringing Persian nobles to his side--again something no other Greek general had to consider.

Gaugamela was the last battle ever fought by the Achaemenid Persian Empire. It is also the best example of Alexander the Great's generalship: it demonstrates the flexibility of his army, shows off the importance of combined arms tactics, and demonstrates his out of the box thinking. It is also the battle in which his army faced the most danger and came the closest to losing. Alexander was vastly outnumbered by Darius' massive army and, unlike Issus, was not able to use natural terrain to restrict the battlespace to favor his smaller force for the Persians had created a massive, level battlefield so that both their numbers could take effect as well as their chariots and cavalry.<sup>218</sup> Alexander's greatest problem was the threat of being outflanked on both sides. To remedy this, he slanted both his flanks an oblique and established another, rear facing phalanx.<sup>219</sup> By doing so Alexander made his formation a rhombus of sorts. The oblique sides made it harder for the Persians to outflank the Macedonians, and the rear phalanx was able to serve a reserve force to plug gaps, extend the line, or defend the rear as needed. The formation was novel and acted to buy Alexander the time he needed to achieve victory. Alexander also had the problem of the scythed chariots to deal with. He posted "half the Argrianians and archers....with Balakros' javelin men in front of the royal squadron and the other Companions; these contingents had been stationed opposite the scythe-bearing chariots."<sup>220</sup> By placing light infantry and skirmishers between the chariots and cavalry Alexander forced the chariots to go through a gauntlet of missiles, which would have obscured their vision, allowing Alexander's

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<sup>218</sup> Arrian, 3.8.7.

<sup>219</sup> Arrian, 3.12.1-4.

<sup>220</sup> Arrian, 3.12.3.



cavalry and infantry to open ranks so that the chariots would pass through--which they did.<sup>221</sup> By intermingling different types of units Alexander was able to completely nullify the chariots, which otherwise would have been able to make adjustments and meet their mark, or have at least forced an early engagement, killing Alexander's much needed mobility. Alexander also extended his right wing all the way to the edge of the prepared ground while keeping his left wing in place and moving forward at an oblique,<sup>222</sup> much like Epaminondas at Leuctra. Alexander thus forced Darius to "command the men posted in front of his left wing to ride around the Macedonians' right, where Alexander was leading, so that they would not extend their wing any farther." Alexander thus began his attack.<sup>223</sup> Darius was forced to extend his line before the battle began, which gave the Hellenes time to prepare themselves. Alexander also seized the initiative and began the battle, again forcing Darius into an action he was not yet ready for. Darius' attention was drawn to Alexander's left wing, which led to a long pause in attacking the other wing. This was important because Alexander, being outnumbered, could not have won on both wings at once. Darius fell into a trap which limited his ability to use his superior numbers to his advantage. After the entirety of both armies had engaged Alexander employed his classic hammer and anvil.

For a time, Alexander himself led his men in column but when the cavalry, charging the Persians who were trying to surround the Macedonians' right wing, first breached the barbarian phalanx, Alexander wheeled about opposite the gap, arrayed the Companion cavalry and the nearby portion of the phalanx in a wedge formation, and led them at full speed and with a war cry toward Darius himself. For a brief period the fighting was hand

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<sup>221</sup> Arrian, 3.13.5-6.

<sup>222</sup> Arrian, 3.13.2.

<sup>223</sup> Arrian, 3.13.2-3.

to hand, but when Alexander and his horsemen pressed the enemy hard, shoving the Persians and striking their faces with spears, and the Macedonian phalanx, tightly arrayed and bristling with pikes, was already upon them....”<sup>224</sup>

The phalanx alone would have been enveloped from the start of the battle, and the cavalry was too few to be able to make a large difference on their own. But together they overwhelmed the Persians and crushed them. An old strategy of Epaminondas is employed here as well. By attacking Darius himself, Alexander was attempting to cut off the head of the snake--which would have caused confusion and demoralization. It was also a brilliant political move: had Darius been killed Alexander would have undoubtedly been able to claim the title of King of Kings when he won. And if Darius fled and Alexander won, it would be clear that Darius was unable to defeat Alexander, was cowardly, and was still decisively defeated. Alexander can claim the title of King regardless. In fact, Darius did flee the battlefield and Alexander pursued him until he received word that Parmenion and the left wing were in danger of being enveloped.<sup>225</sup> He then wheeled about and crushed the Persian right between him and his left wing.<sup>226</sup> It is amazing that Alexander was able to not only receive word about what was happening across the battlefield, but then assess the situation and act. It is clear that Alexander’s army had dependable and clear lines of communication since he received word in the middle of a rapidly evolving and chaotic battlefield. His quick actions emphasize the need for a general of this type of army to be able to act quickly and take into account the many facets of his army. Command had become far more complicated with Alexander’s army.

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<sup>224</sup> Arrian, 3.14.2-3.

<sup>225</sup> Arrian, 3.14.3-5.

<sup>226</sup> Arrian, 3.15.1-3.

A nearly endless amount of possible formations, unit combinations, and stratagem were born, but they all required a combined arms approach. But these could only be completed by a well-trained professional army led by a very competent leader. And no leader after Alexander has proven quick so competent.

## **Conclusion**

Three hundred years of Greek warfare have demonstrated that the way in which war is fought changes out of necessity. If an army is placed in a vacuum it will not evolve and it will not change, but it will progress in the sense that it will become more proficient in its way of fighting. Classical Greek warfare was like this. There was no need for Greece's hoplite armies to involve anything other than heavy infantry in the battle's main action because it was the hoplite that determined victory. Sparta had the period's archetypal army. Her very heavily armored men lined up shield to shield in their phalanx and marched, unlike the rest of the Greeks, steadily into battle to the sound of flutes until they met their adversaries and began to kill men in the grinder that commenced when two phalanxes came to blows. Since spears were used to fight and kill the enemy it was necessary for the ranks of hoplites to have space between each other. Armies did not literally push the other off the battlefield, it would have been impractical and nonsensical for armies of spearmen. Rather, armies figuratively pushed each other off the field of battle by forcing the enemy to retreat in the face of the other's spear points. The Greeks did not have extensive contact with peoples outside the Hellenic sphere. Resultantly, wars were primarily fought between neighboring city-states, which led to very simple logistic systems that focused very heavily on easing the burden on hoplites through the use of slaves, servants and wagons. This was possible because armies did not have to go very far in order to reach the battlefield. The manner in which Greek armies travelled and supplied themselves, was therefore very clunky. An

additional factor that made logistics overburdened was the religious affairs that accompanied war. Unlike in the modern era, where religion and daily life are thought of as separate, the ancient Greeks' religious affairs were intertwined with their everyday lives. Commanding generals, which in Sparta's case was one of its kings, were responsible for consulting the gods, performing sacrifices on the march, in the camp, before and after battle, and all other religious acts on behalf of the army. Consulting the gods and having their permission and their blessing to go to war or even to go into battle had a profound mental impact on the soldier, and provided political legitimacy for war. Without consulting the gods or acting on unfavorable omens—therefore acting against the gods' will--it would have been unthinkable to the citizens of the *polis* to go to war or to battle. Soldiers would have marched into battle hesitant and more ready to retreat.

The vacuum that had existed in Greece was finally ruptured by contact with the Persian Empire in Ionia. Persian incursions prompted Athens to attempt to aid the Ionian Greeks, which in turn led to Persia's invasions of mainland Greece and the Persian War. Being masters of the phalanx, the Greeks attempted to neutralize the Persians' greatest advantage--large numbers of mobile, long ranged troops--while attempting to cover their own weakness--the phalanx's vulnerability to the flank and rear. At Marathon, the Athenians purposely stretched their line and did not engage the enemy until the cavalry had left. And at Thermopylae it is evident that Leonidas was forcing Xerxes into a chokepoint so that he could not overwhelm the Greeks. Contact with the Persians immediately caused changes to the equipment used by hoplites. Armor became lighter and helmets began to open so that it was easier to see and hear. Modifications such as the sheet or drape that was hung off the bottom of the *aspis*, which was undoubtedly meant to defend against arrows and other projectiles, make it clear that hoplite equipment

changed to cope with lighter, more mobile types of soldiers. The Persians exposed deficiencies in Greek strategy and armament. Another huge problem that was exposed was the Greeks' inability to support the huge armies formed by the alliance of Greek *poleis*. At Platea, this problem was very evident, and provided Greek commanders with knowledge of these deficiencies, which allowed them to improve their logistics afterward. Changes made to Hellenic warfare were, therefore, made from necessity for survival.

In the immediate aftermath of the Persian Wars a cold war erupted between Sparta and Athens, much like the one that took place between the United States and the Soviet Union. However, in the case of Sparta and Athens, the cold war turned hot. Innovations made during the Peloponnesian War focused on bringing light infantry to the main sector of the battle. They were not the focus of battle, that was still the hoplite, but they played a much more prominent role in battle. So much so that they were actually able to be the deciding force at Sphacteria, which led hoplites to further shed their armor in an attempt to gain mobility so that they could cope with the new threat. Naval warfare, which the Athenians relied on at the end of the Persian War, and then afterward to build their empire, came to a much more important position as well. Making more extensive use of their navies allowed the warring states to fight much farther from home than they ever had. Greeks moved all over the mainland to fight the Persians, which was in itself farther than normal. But the Peloponnesian War saw conflict all over the Aegean, and even in Sicily. The logistic systems employed had to advance in order to cope with such distances. Farther distances also meant an army was away from home for a longer time, an additional strain on logistics that had to be overcome. But the war was not fought so that the Spartans and the Athenians could conquer each other. That is not how Greeks conducted warfare. Each wanted to be number one, the unofficial hegemon. That is why the Spartans, after defeating Athens,

installed an oligarchy rather than making Athens directly subject to Spartan rule. Greek warfare changed out of the necessity for victory.

The years after Sparta's victory saw many changes too. Xenophon and the Ten thousand, out of the need to survive their journey home, created makeshift units of cavalry and skirmishers. Iphicrates furthered the use of skirmishers on the Greek mainland as well--for him it was a mix of survival and victory. The most significant evolutionary development of the Fourth Century was brought about by Epaminondas of Thebes. Along with the commander of the Sacred Band of Thebes, Pelopidas, Epaminondas led Thebes to victory after victory over Sparta and her allies, most notably at the Battle of Leuctra. Epaminondas made purely tactical changes to the hoplite phalanx itself. By placing his best men across from the enemy's best in a very deep formation, and by creating an oblique phalanx, Epaminondas was able to overcome insurmountable odds. The Sacred Band alone was a huge leap for the Hellenes. They were the second state sponsored, professional soldiers in Greek history--the Spartans being the first and only up to this point. Thebes had proved the importance of professionalism, a lesson Philip II of Macedon learned and later implemented. The need in this case was the need for victory in order to come out from under the thumb of Sparta.

Philip II of Macedon completely turned Greek Warfare on its head. He made sweeping changes to the arms and armor of his phalanx, brought cavalry to the forefront of his strategy--since Macedonians were horsemen after all--and integrated light infantry and skirmishers into the army to create the first combined arms force in Greek history. He and his son, Alexander the Great, used this army to conquer the Greeks. The new phalanx, in particular, was spectacular since it was basically impossible to defeat from the front. But by the same token it was also far more vulnerable on its flank and rear as well as far less maneuverable than a traditional hoplite

phalanx. That is why Philip's army had to be built on the premise of combined arms, otherwise it would not have survived. Philip changed the motives behind Hellenic warfare forever too. For the first time the Greeks were fighting another Hellenic people to avoid being ruled by them. Philip and Alexander both succeeded. Warfare changed again out of the need for victory, and in part the survival of the phalanx.

Alexander the Great continued to develop the army, adding new units and making further improvements to siege warfare and artillery. His real genius was at the tactical level where he, out of the need to conquer the Persian Empire, used a variety of formations and strategies to defeat larger forces. His improvements to logistics are a close second. Alexander carried over many of Philip's policies, but had to innovate on his own for his army to survive. The forethought that was put into supplying and moving his large number of forces while being thousands of miles from home for years is the main reason that Alexander was able to cross terrain that many others had failed to do without serious casualties. Alexander also took religious activities to the extreme. It is not that he did anything drastically different. He simply did things on such a much larger scale or so purposefully that he was able to take much greater advantage of the benefits, politically and among the psyches of his men, to further his ability to campaign. This was also a necessity of survival.

It can then be said that the primary driving forces were the needs for victory, conquest, and survival. They are so very simple. They are very basic products of people of society. Yet they had implications that reverberated throughout the ages of time. Without the need for survival against the Persians the Greeks may not have changed their ways until it was far too late, which ultimately would not have made it possible for Alexander the Great to march to the end of the known world. These same needs can easily be seen in modern militaries because

people may vary from time and place, but they are still people and they still function on the same basic principles. A conqueror such as Alexander or a vacuum such as the Greeks had before the Persian War may never exist again, but there will always be war, and the manner in which wars are fought will always change, and the same patterns will prompt these changes.



## Appendix A

### Figures



Figure 1



Figure 2

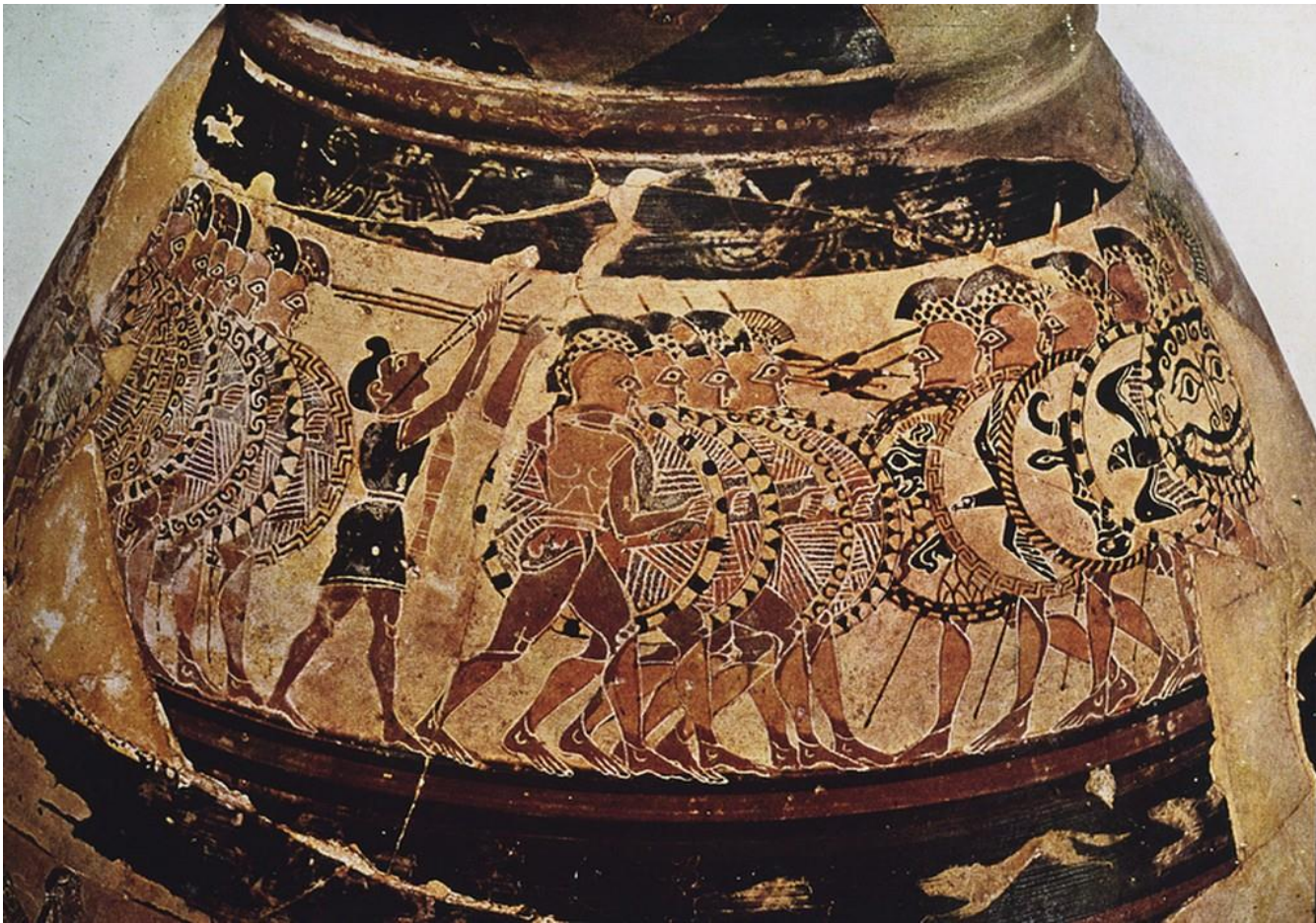


Figure 3





Figure 4



Figure 5



Figure 6



Figure 7



Figure 8



Figure 9





Figure 10



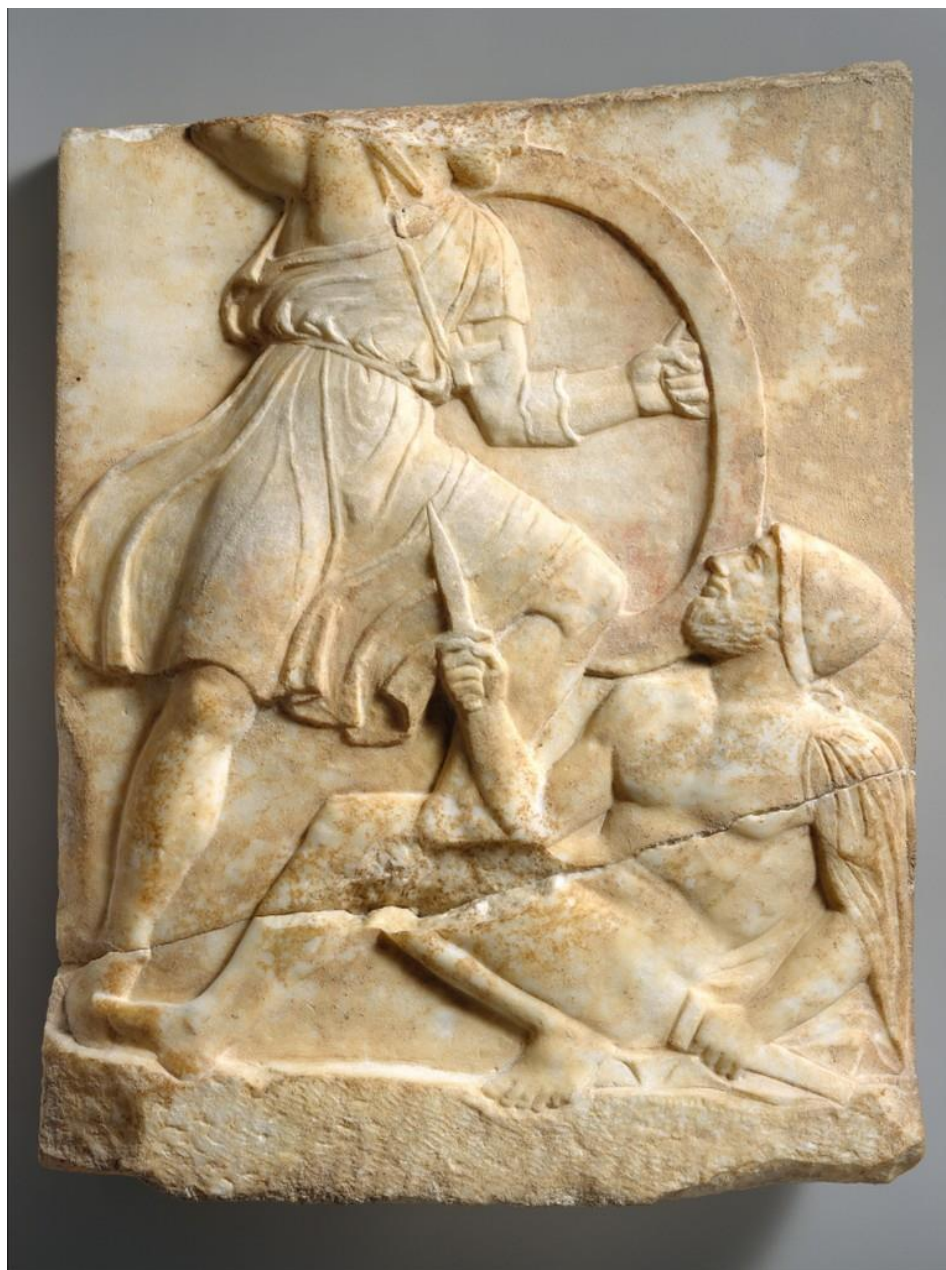


Figure 11



Figure 12

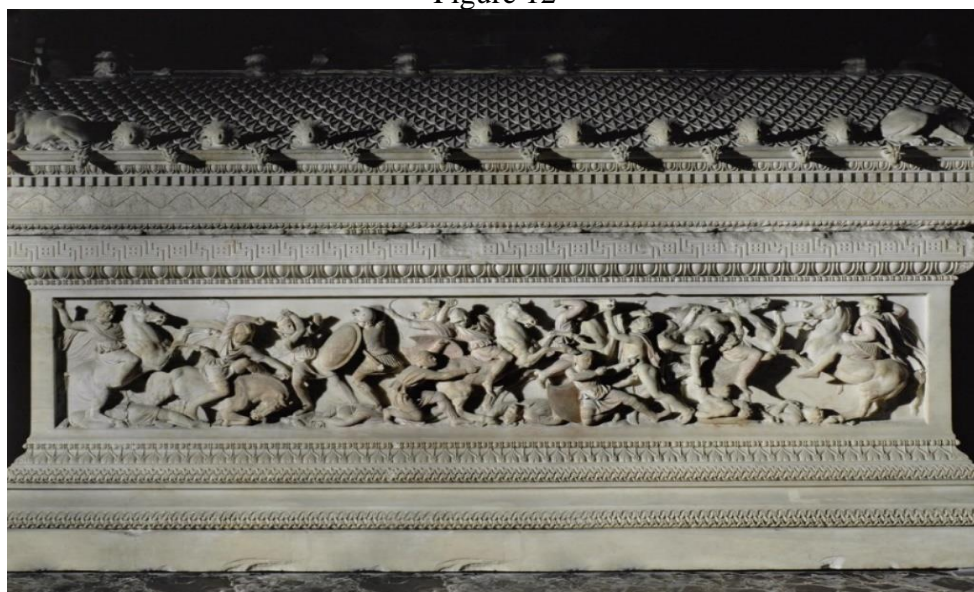


Figure 13





Figure 14

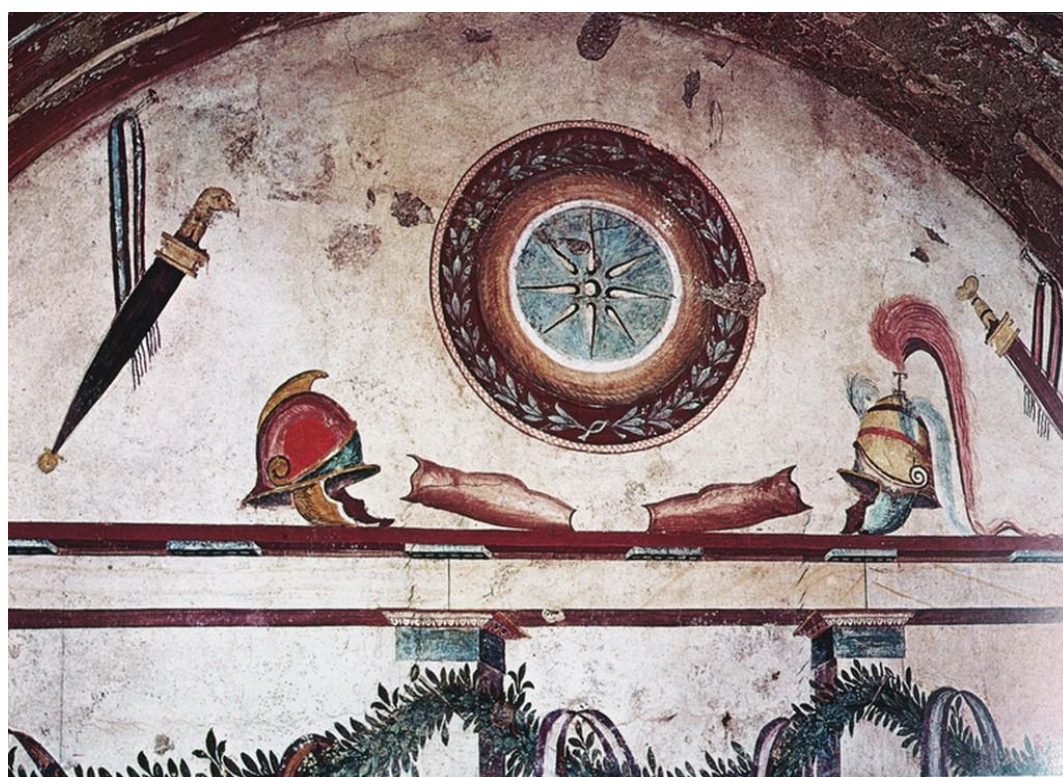


Figure 15

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## **Illustrations**

2nd 1/2 2nd C. B.C. Lefkadia: Tomb of Lyson and Kallikles wall painting, interior: det.: armor.

<https://library-artstor->

[org.ezaccess.libraries.psu.edu/asset/ARTSTOR\\_103\\_418220004083](https://library-artstor-org.ezaccess.libraries.psu.edu/asset/ARTSTOR_103_418220004083)

91.

2nd 1/2 2nd C. B.C. Lefkadia: Tomb of Lyson and Kallikles wall painting, interior entrance.

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c. 490-480 BC. Fragment of a Kylix. Ceramic. Place: <A

HREF=<http://www.clevelandart.org/>>The Cleveland Museum of Art</A>, Cleveland,

Ohio, USA, Collection: GR - Greek, Department: Greek and Roman Art, Gallery: 102B

Greek, Dudley P. Allen Fund.

<https://library-artstor-org.ezaccess.libraries.psu.edu/asset/24584699>.

ca. 390 B.C.. Grave stele with Hoplite Battle Scene. Grave stele of a warrior, fragment, Stone

Sculpture. Place: <A HREF=<https://www.metmuseum.org/>>The Metropolitan Museum

of Art</A>. <https://library-artstor->

[org.ezaccess.libraries.psu.edu/asset/SS7731421\\_7731421\\_11409244](https://library-artstor-org.ezaccess.libraries.psu.edu/asset/SS7731421_7731421_11409244).

ca. 490 B.C.. Vessel (kylix; red-figure; ht. 5 5/16"; diameter 12 3/4".. Place: Paris: Mus.,

Louvre; No. G152.. <https://library-artstor->

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Late 4th century BCE. Alexander Sarcophagus, long side, battle scene. sarcophagus. Place:

Archaeological Museum, Istanbul, Turkey.

[https://library-artstor-org.ezaccess.libraries.psu.edu/asset/LESSING\\_ART\\_10311440492](https://library-artstor-org.ezaccess.libraries.psu.edu/asset/LESSING_ART_10311440492).

Macmillan Painter, fl. 660-640 B.C. c.650-640 B.C. Olpe: View 1, Chigi Vase.

<https://library-artstor->

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52.

Macmillan Painter, fl. 660-640 B.C. c.650-640 B.C. Olpe: view 3: Hoplites being played into battle, Chigi Vase.

<https://library-artstor->

org.ezaccess.libraries.psu.edu/asset/ARTSTOR\_103\_418220003992

02.



# ACADEMIC VITA

Dante Anton De Bonis

**Education:** The Pennsylvania State University

**Majors and Minors:**

History (Major)

Classics and Ancient Mediterranean Studies (Major)

Military Studies (Minor)

Greek (Minor)

**Honors:**

Deans List Spring 2017-Spring 2021

Phi Alpha Theta History Honor Society Member

National Honor Society Member

**Language Proficiency:**

Italian (6 years)

German (1.5 years)

Ancient Greek (2 years)

Slovenian (conversational)

**Work Experience:**

F&W Schmitt Family Farm (6 years)

Osprey Fishing Boat (2 years)

Knight Fencing Gear (5 years)

Hotel State College: The Basement Nightspot and Bill Pickle's Taphouse (3 years)

Lombard MMA (1 year)

**Military:**

NROTC Midshipman at the Pennsylvania State University.

Served on the NROTC Battalion's battalion staff as the Assistant Public Affairs Officer and as the Physical Training Officer.

Graduated from the Marine Corps' Officers Candidate School August 2020.

Will be a commissioned officer in the United States Marine Corps beginning 17 May, 2021.