

KoryVantes M. E. Kambouris

Warfare in Mycenaean times: the Iliad as a paradigm and the applications emerging for experimental archeology

SLIDE 3

Although the Homeric issue rages, in the Iliad the cohesion of military information makes certain that the author was contemporary, had top-quality information as tactics and injuries cannot be imagined if not experienced/witnessed and was very well acquainted with combat particulars, although some shadows do loom in some excerpts (N-685; such inconsistencies may be due to the ages-long oral transmission, as, before Peisistratic recording, the epic cycle was transmitted orally. This by no means implies it was compiled in oral form: it was compiled, however, to be orally transmitted in a world of myth, lore and legend.

SLIDE 4

The Homeric world is focused on two competing powers: the Mycenaean or Achaeans and the Trojans and their allies. The former were very much from Axios river, in Macedonia, all the way to Cyprus (Λ-20), with some exceptions: a part of western Greece (Acarmania-Ampilochia) did not participate due to enmity towards the high king Agamemnon, a part in NW Peloponnese is also vividly absent despite its wealth of archeological findings of the era (Museum of Patras), and the Cyclades Isles are not mentioned. To the contrary, the SE Aegean was securely under Mycenaean control and part of the campaigning force.

The Trojan confederacy was securely from the Axios River in Macedonia (Π-287) to Lycia in SW Asia Minor, whereas its alliances were extending deep into Asia Minor, at least to the river Sagarius (Γ-185). Thrace and almost half of Macedonia are with the Trojans, and so is the NE Aegean, with the prominent Exception of Limnos, which was turned to the Mycenaean side a generation previously. For the big island of Chios there is no mention, nor is any for Samos and Ikaria. Contrarily, Lesbos and Tenedos were Trojan allies and stormed by Achilles at the first phases of the war. Imbros and Samothrace are mentioned as islands but not as theaters of action, and their allegiance is not declared. The relations with the Levant proper are uncertain: a contingent came to help under Memnon, the king of Ethiopians, but this name even in Herodotus is used for the black population south of Egypt, for a similar population in India and for the Assyrians just opposite of Cyprus. Homer mentions nothing on the subject, but he does mention that Paris has sacked Sidon, the greatest Phoenician city (Δ).

SLIDE 5

There is no question that the Trojan and allied army is a feudal conglomerate under the high command of the Lord of the Hosts of Troy, Prince Hector (who might or might not have been crown prince). Allied contingents have arrived before his offering battle to the invaders, after 10 years behind his walls, and continue to arrive by the day and are thrown piecemeal at the battle, as they arrive. The basic unit are the 50 men and the size is approximately

50.000; Dolon, the Trojan spy arrested and debriefed by two Greek Rangers declared 1.000 campfires, around each 50 men sleeping, sitting or eating (Θ-562/4).

SLIDE 6

The Greek army had the same unit of 50, as the main ship is the 50-oared galley (pentekonter) of unknown model (B-720, Π-170). Nevertheless there are some very large ships carrying 120 troops of a certain contingent (B-510); whether all of them were doubling as rowers or not is not stated. There were also 20-oared galleys for other missions (A-309). But the similarities stop there.

The Greek army is NOT a feudal levy, but an integrated organization with distinct functions. During the most part of the Iliad it is indeed operating (and with little success) as a feudal levy, since Achilles, the mind and soul and acting CīC (as stated in Odyssey γ-106) is estranged. Before the new series of clashes, described in Iliad, which happen in the 10th year of the war, the elderly tactician Nestor advises the High Commander Agamemnon to deploy the army in feudal manner (B-361/8). This means that for 9 years the army was NOT deployed in such a manner, and this differentiation is due to the absence of Achilles. Once he is back, he clearly issues all the executive directions and orders (T-155, Ω-670) and the army is no feudal assembly, but an efficient war machine. Many scholars detect dramatic effect and projection in this advice of Nestor, but had it been so the poet would have easily projected it into the past, as he did in other cases, as with the pursuit of Aeneas (Υ-187/91).

SLIDE 7-8-9

The Greeks have a well-organized medical Corps, with two asclepiad brothers (Δ--193, Λ-833), Machaon (surgeon) and Podaleirios (Internist). They tend both wounded and sick and are much admired and valued, but their humanity is not in question. Nothing divine or miraculous. Moreover, many a warrior, such as Achilles, Patroclus, Sthenelus and others are adequately trained in first aids and wound care, extracting arrowheads and dressing the wound (Λ-830) while also offering analgesic medication. No such thing with the Trojans. There the Gods, within their temples or *ad hoc* offer miraculous treatment (Π-528, Ε-447/8), implying that the healthcare is at the hands of the priesthood, mostly of that of Apollo, the patron deity *par excellance*. The best a Trojan noble or follower can do is to bandage a wound with a woolen strip, (Agenor brought along a number for such an emergency and used it on Helenos) to stop the bleeding or any major mechanical deterioration (N-599/610)

Both armies are centered on the heavy armed and armored noble warrior. The armor of such nobles is plate bronze or copper, but the mention of "copper tunic" (N-439) for one – rather elder-Trojan ally implies also a scaled body panoply. The warriors combine heavy armor with mobility; both Achilles and Hector is fleet of foot, excellent charioteers, big of stature and very strong, epitomizing the heroic concept of "tall, strong and brave" adding the "fast". Other heavily armored warriors in both sides are also notoriously fast: the Greek Antilochos who is an accomplished charioteer, and the wily Odysseus, who has no chariot (not to mention the lightly armed Ajax the Lesser). From the Trojan side, Aeneas, Glaukos and Paris, all of them possessing chariots. The heavily armed and excessively trained warriors disembark their chariots to fight on foot, and are supported by chariot runners in

the Egyptian manner (they are implied twice for the Trojans, one being the prince Polydoros) and rank and file infantry, while the chariot proper awaits nearby with the driver at the ready to extract them from the fray or to allow a hot pursuit. The Trojans have better chariotry: some of their allies use two-horse teams (E-195), but some of the Trojans (Hector himself mentioned specifically and by name of the horses) have four-horse teams (Θ-185); whether in two tandem pairs or four abreast it is not known. The Greeks have two horse teams (Ψ-290/305), and Achilles uses a third horse (Π-149/53) not to drag the chariot, but to make the turns swifter.

SLIDE 10

Both Trojans and Greeks use from their chariots extremely long and heavy lances, perhaps the "egxeiai" of the tablets, with massive warheads reminding Japanese naginatas of the 16-17th centuries; that is for both thrusting and cutting. Hector, who is specifically mentioned as holding a 11-cubit such lance (Θ-494), is also mentioned to pursuit the rank and file on chariot and thrashing heads (Λ-309) and wielding his spear. This adds up to the aforementioned weapon. Most obviously, this is also the nature of the great spear donned to Achilles by his father, which could not be wielded by anyone else (Π-140/3). So heavy a weapon might not be a javelin or anything light enough for casting. It is not accidental, that the Greeks considered lanced chariotry fighting in jousts (as Nestor advocates, Δ-306/7) a thing of the past; Nestor, the Elder, is synchronous with the apex of such practice, as had been the father of Achilles. But, for dismounted fighting, the lance may prove impractical. For this reason the warrior is always equipped with a general purpose spear, fro casting and thrusting alike, and generally carried in pairs (Z-104). This reminds us of the very later Persian "palta" of the cavalry, much praised by Xenophon. The pair of spears is mentioned many a time Hector jumps out of his chariot, and this might imply that he changes weapons, from lance to spears. It is obvious that both lance and spears are routinely secured within the chariot. What is of importance, is the fact that one of the very few Trojan allies who came on foot because he doubted the adequacy of fodder for his (two-horse) teams, has taken his bow INSTEAD; his phrasing points to the bow being mutually exclusive with charging chariotry (E-192/210), much unlike the Egyptian practice-but perhaps consenting to the one of Hittites.

SLIDE 11-16

It is very strange that the Greeks, who despise the weapon, have also competent archery skills. The troops of Philoktetes are good archers and may fire individually (B-720), Teukros exemplifies the pair of heavy shield-bearer-archer (Θ-265/70) with his brother Ajax the Great although he may fight with spear and shield, as medium or heavy infantry, whereas the Locrian contingent fires en masse from a distance (N-716/22), shirking contact and shooting some Trojan assaults to pieces from behind the storm troops' lines. Except medium infantry, chariotry and missile troops, that is archers, the Greeks also have heavy shielded infantry for static defense, a commodity never implied for the Trojans. The personification is Ajax the Great, a very tall and strong warrior, the second in valor and merit to Achilles, but never accused as fleet of foot nor seen to mount a chariot. His resolve, steadfastness and

endurance are admirable. He is supported by either his brother Teykros, the archer, or another chariotless king, the Locrian chief Ajax the Lesser. Although his contingent is archers only, Ajax the lesser is storm trooper, but definitely light infantryman, as he substitutes metal armor with linen corselet (B-529). He is very fast, an excellent spearman and offers to Ajax the Great's stability a skirmishing support (P-719/21) and a destructive power of pursuit (Ξ-520/1), more or less exposing the combined tactics of the integrated Greek army.

For army tactics, Achilles favors charge and clash (Y-354/5); this is not always the choice of neither commander, who may stop at a distance and exchange missile fire as did the european armies of the 16-18th centuries, while skirmishers, usually the well-protected nobles, may jump in between opposing armies and strike targets of opportunity. After a prolonged exchange which has softened up the one opponent, the other one charges (Λ-85/90).

-Trojans attack with fire, but also making good use of the wind and fog (O-668-70, P645/50), by mimicking thunderbolts (Θ-135) and by opening dams and using water to flood a portion of the battlefield (Φ-235/70)

-Ajax long naval spear, 22 cubits (O-678)

-Greeks have very tight phalanx formations (N-130, P352-65); the Trojans cannot do the same, nor break them.

-Greeks tower shields and perhaps 8-shields, Trojans 8-shields. Hector has a body shield which demands dexterity in moving and when thrown back it is felt at heel and neck while running (Z-118). Both use round shields.

And many more which are going to be presented in the paper

SLIDE 17-18-19

Experimental archaeology-experimental history

There are many issues in the above observations. Some focus on "how was that done" and others on "is this possible?". The ability to do it today in reenactment or simulation proves positively that a procedure is attainable. It does not prove that the ancients did it in this way. And if today we cannot do it, the negative value of the simulation is limited. They knew better....

Some things are just a matter of sweat. Issues can be simply tried by teams in a field. The way in which standard shield-bearers, armed with extra-long lances (egxeiae) were deployed is one of such problems. A close phalanx would have them crushed by the leading teams of chariotry. An open deployment would expose them to runners and light infantry. the fresco of Thera, showing a dispersion which allows motion so as to avoid being trampled by the chariot, while by the length of the lances remaining able to support a comrade from infantry swarm is a nice subject for experimentation.

The way the heroes chased after their cast spear using the force of the cast to follow, not to recoil as today's athletes, in order to either retrieve the weapon or to continue the attack with the sword (as does Menelaus against Paris and Achilles against Aeneas) before the initiative is seized by the opponent is another interesting issue (as described in N-512 that Idomeneus was ... too mature to be capable of). This practice is highly reminiscent of current protocols for air battles by fighter pilots, who engage the enemy successively using the longer-range weapons to gain time and advantage as they close in for shots with shorter range ones. In this case the "DD", the "duel dance", which means the almost standardized procedures in homeric duels which, though, had tactical meaning, may be validated only by reviving and reenacting such moves with realistic weaponry.

But other issues need different approaches. Really, what's the relation of Chinese bronze age warriors and Mycenaean/Levantine ones? Is it possible that the converging evolution produced warrior kits that similar? Or was there some missing link?

And others need more elaborate skills, schemes and equipment.

Can there be a bow made of horn as is stated for Pandarus? The issue is not if the Scythians, the English or the Mongols did it otherwise. Is it possible? Or, as with the shield of Achilles, a technological secret is wrongly perceived due to the common name (bow made of horn- implying that it is not just of wood, as usual ones, but horn has been used, too-though not exclusively). Poets are not technicians-although they might be surgeons or warriors or even farmers and herders. Thus technical details are not their strong point.

What is the metal for the greaves? Are they copper/bronze? The Greeks are mentioned as "having white greaves" or as having nice greaves". The latter is never used for Trojans; they may be assumed not to use them. But the white Argive greave, is it painted/ what is the metal of Achilles' ones, which staved of a direct spear-cast? Tin does not convince. Is there any other, white metal?

Are we right to suppose the weapons of the era were not of copper but of bronze? Copper is not durable, but this is for pure copper. The mines of Greece do not produce very pure copper and the admixtures of the native copper ore provide readily a rather robust product. Are there any spectral analyses of findings, to see whether tin was such a strategic metal after all? Or was it mostly used for cooking pans, to avoid copper poisoning?

Attacking through the fog and mist or with the wind on the back would be easy for a native host. The prompt kindling of fire to prepared torches for the moment the enemy ships would be reached upon is also rather simple. But what is to make of the pinpoint accuracy with which Diomedes is assaulted by lightning bolts- which defy natural laws and instead of Ozon smell of Sulfur? With the known ingredients of the period can one be too bold to assume the use of black powder, which is easy to make and smells of sulphur, while producing the noise of the thunder? Does this have something to do with the appeasement of the priests of Minerva (the Goddess of Inventions) in Troy by Hector's seer-brother Helenos? It is not very original. The Thebans most probably had used it on Sthenelus's father, Kapaneus, thus claiming victory a generation earlier.

The ultimate experimental goal would be the restoration of the composition of the shield of Achilles. In here there is metallurgy, the disdained art. Homer writes that copper, tin and gold where used in 2/2/1 ratio (γ -270/2) and believes tht this means leaves. Is this so? In such case, what was the order? Gold was in front, at the back or in the middle? If in the middle, the layers of copper and tin where palindromes or tandem? And what if it is NOT so? Even the best scribe and poet might not understand that these are the necessary ratios for forming an alloy, instead of using the ingredients laminarly. Do we have anything to learn from this rprocess as far as armoring and protection from kinetic energy threats (not only in warm, but also in urban and industrial accidents) are concerned?