Chariot Warfare in the Late Bronze Age

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Abstract

Some of the most notable protagonists of warfare in the Late Bronze Age (c. 1600–1200 B.C.) included the Egyptians of the XVIII and XIX dynasties, the Mitanni (Hurrian-speaking people of northern Syria), the Canaanites (Semitic-speaking people of the Ancient Near East), and the Hittites (Anatolian people of present-day Turkey). While on first impact their combat techniques seem similar, there were differences—sometimes subtle, sometimes significant—that rendered their successes and failures unique to their own methods, particularly when it came to chariot warfare. However, ancient reliefs do not always clearly indicate how chariots were tactically employed—whether armies used them as battle taxis or as mobile firing platforms. This article will compare and contrast chariot warfare of all these ancient societies and the various methods they used to operate them in an effort to solve some long enduring questions that research has still not conclusively answered.

Keywords: chariot warfare, battle taxis, mobile firing platforms, composite bows, *Nuzi* tablets, ambush tactics, body armor, *maryannu*

Guerra de carros a finales de la Edad del Bronce

Resumen

Algunos de los protagonistas más notables de la guerra a finales de la Edad del Bronce (c. 1600-1200 a. C.) incluyeron a los egipcios de las dinastías XVIII y XIX, los mitani (pueblo de habla hurrita del norte de Siria), los cananeos (pueblo de habla semítica del Antiguo Cercano Oriente), y los hititas (pueblo de Anatolia de la actual Turquía). Si bien en el primer impacto sus técnicas de combate parecen similares, hubo diferencias, a veces sutiles, a veces significativas, que hicieron que sus éxitos y fracasos fueran únicos a sus propios métodos, particularmente cuando se trataba de la guerra de carros. Sin embargo, los relieves antiguos no siempre indican claramente

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cómo se empleaban tácticamente los carros, si los ejércitos los usaban como taxis de batalla o como plataformas móviles de tiro. Este artículo comparará y contrastará la guerra de carros de todas estas sociedades antiguas y los diversos métodos que usaban para operarlas en un esfuerzo por resolver algunas preguntas persistentes que la investigación aún no ha respondido de manera concluyente.

Palabras clave: guerra de carros, taxis de batalla, plataformas de tiro móviles, arcos compuestos, tabletas Nuzi, tácticas de emboscada, chalecos antibalas, *maryannu*

青铜时代晚期的车战

摘要

青铜时代晚期（约公元前1600年至公元前1200年）最著名的战争主角包括十八和十九王朝的埃及人、米坦尼人（叙利亚北部讲胡里安语的民族）、迦南人（古代近东讲闪米特语的民族）、以及赫梯人（今土耳其的安纳托利亚人）。虽然乍看之下，他们的战斗技巧似乎很相似，但其实是存在差异的——差异有时细微，有时显著——这使得他们的成功和失败就其采用的方法而言是独特的，尤其是车战。不过，古代的浮雕并不总能清楚地表明战车的战术性使用——即军队是将其用作战车还是用作移动射击平台。本文将比较和对比这些古代社会的车战以及车战的操作方法，以期解决一些长期存在的、研究尚未最终回答的问题。

关键词：车战，战车，移动射击平台，复合弓，努斯泥板，伏击战术，防弹衣，maryannu

Some of the most notable protagonists of warfare in the Late Bronze Age (c. 1600–1200 B.C.) included the Egyptians of the XVIII and XIX dynasties, the Mitanni (Hurrian-speaking people of northern Syria), the Canaanites (Semitic-speaking people of the Ancient Near East), and the Hittites (Anatolian people of present-day Turkey). While on first impact their combat techniques seem similar, there were differences—sometimes subtle, sometimes significant—in the way they used them that rendered their successes and failures unique to their own methods. However, determining

the similarities and differences is not an easy task, particularly when it comes to chariot warfare. Ancient reliefs do not clearly indicate the design differences of the chariots or how they were tactically employed, including whether armies used them as battle taxis to transport fighters to and from the battlefield or as mobile firing platforms. This article will compare and contrast the chariots of these ancient societies and the various methods they used to operate them in an effort to solve some long enduring questions that research has still not conclusively answered.

It is important to begin this study by highlighting the difficulties associated with researching, analyzing, and interpreting the ancient world. As with all of history, sources are never irrefutably verifiable, since the players are dead and cannot answer the many questions that scholars may have. But when it comes to history this ancient, there is also, quite simply, less evidence to work with. Time has claimed much of it, leaving behind ruins full of gaps, creating mysteries that researchers must solve. Furthermore, inscriptions of battle victories were often subject to hyperbole to glorify their leader. Most importantly, many of the extant accounts of warfare in the Late Bronze Age derive from illustrations and inscriptions of the Egyptian Dynasties and are thus partial to the military prowess and victories of the pharaohs.[1] In his book *The Battle of Kadesh: A Study in the Earliest Known Military Strategy*, Egyptologist James Henry Breasted describes the way Ramesses II (*r.* 1279–1213 BC) glorified his own courage against the Hittites at Kadesh in 1274 BC. Deserted by his own men after the Hittites ambushed and plundered his camp, Ramesses fought the enemy seemingly by himself in a battle that lasted three hours. "I made slaughter among them, and there was none that escaped me."[2] Breasted states the obvious: Ramesses could not have fought an army of thousands on his own. He must have had the backing of a small group of forces to help him hold his own against the enemy. Although both sides of this battle claimed victory, Ramesses had his temples adorned with triumphant reliefs. In reality, while Hittite King Muwatalli II (*r.* 1295–1272 BC) failed to crush the Egyptians, Ramesses failed to capture the city of Kadesh, which was his ultimate goal. More importantly, both sides suffered great loss of human life.[3]

Because of these inscriptional embellishments, scholars must examine all sources in conjunction with other findings that have survived antiquity and produce a reliable (yet inevitably debatable) picture of what it must have been like. Bearing this in mind, it will be easier to proceed with a careful analysis of the various military methods and weapons used by these ancient societies.

Although this study will consider land warfare, an abbreviated mention of naval warfare is nonetheless important. Thutmose III (*r.* 1482–1425 BC) understood the difficulties associated with moving large troops and machines over land from Egypt to Canaan and Syria where he and other pharaohs typically met their northern enemies for battle. He was keenly aware that,

without a proper navy, he would not be able to bring the northern Asiatic territories under Egyptian control every time threats arose. His first campaign, the Battle of Megiddo (1481 BC), was a learning experience. The long, 350-mile trek took a toll on his men, animals, and equipment. His mission was not only to construct larger ships, but to increase their number.[4] His naval improvements ultimately served him well during his campaigns against Syria[5] and eventually assisted Ramesses II (*r.* 1279–1213 BC) in defeating the Sherden sea pirates—one of several ethnic groups of the Sea People. The Sea People were seafaring marauders who were continually inflicting havoc on the Mediterranean coastlines in the Late Bronze Age.[6] Their relentless invasions also motivated the Hittites to finally take an interest in naval warfare.[7] The Canaanites, who had established a *thalassocracy*[8] during this time, typically used their ships to supply goods to coastal cities. However, in an effort to halt the invasion of the Sea People, they used their fleet for warfare.[9]

Naval warfare aside, it is ironic that in an era of bronze, two of the most ground-breaking artifacts of war were made of wood. These were the chariot and the composite bow. Chariots were common to all kingdoms of the Near East since the beginning of the third millennium BC, but initially they were ponderous, four-wheeled vehicles pulled by oxen and used for transportation. (*See* Figure 1) On the battlefield, these ancient kingdoms often relied on foot soldiers—infantries of simple-bow archers, axmen, and spearmen, who attacked each other—phalanx against phalanx. Chariot warfare only became significant in the seventeenth century BC when the infantry of one army began encountering scores of chariots—mounted by archers—on the battlefield rather than units of foot soldiers like their own.[10]

Ancient reliefs throughout the Near East demonstrate that, from the start, archery was central to chariot warfare. However, early Sumerian evidence illustrates javelin and spear throwers riding on the chariot, rather than archers—as the Standard of Ur war panel seems to depict in Figure 1. The cumbersome weight and poor maneuverability of these early war vehicles may have provided little advantage for the bowman. They could not easily and quickly run circles around the enemy and discharge a barrage of arrows to confuse them. Furthermore, there were weaknesses in the mechanical function of the simple bow. Crafted from a single piece of wood, the simple bow had longer, heavier limbs and used more energy when at full draw than the composite bow, which had shorter arms. To protect the simple bow from losing power over time, the archer needed to unstring them every time they were not in use and brace them again before each day of battle. Stringing and unstringing the bow under harried, wartime conditions risked twisting and weakening the bow limbs. This made them inefficient in warfare. With the introduction of the lighter horse-drawn chariot in Western Asia in the middle of the second millennium BC, a new type of bow replaced the simple bow called the

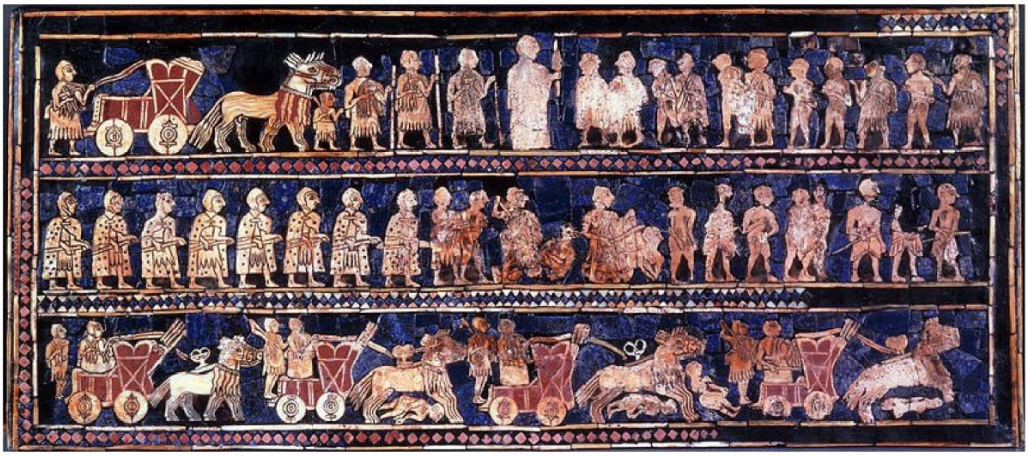

Figure 1: Standard of Ur War Panel from the third millennium BC showing cumbersome four-wheeled Sumerian chariots. Four-wheeled Sumerian chariots were initially transportation vehicles pulled by oxen. When they began to use them as war vehicles they used horses. [British Museum London. Licensing: Public Domain.]

composite bow. Crafted specifically for use in chariot warfare, it was a stronger weapon made of wood, horn, and sinew laminated together; it could remain strung for longer periods of time without losing power and, thus, be ready for use at any given moment.[11]

Oddly enough, the following passage from one of the *Mari* letters cited in *The Assyrian Dictionary* (CAD) seems to suggest the opposite—it appears to explain how warriors strung their composite bows on campaign. "[T]hey should wrap (?) the new bows with tanned leather and turn the end toward the center (i.e., bend the bows?), these bows will go on campaign with me."[12] The question marks in the above passage indicate a lack of academic consensus over the exact meaning of the phrase. Miller et al. caution that the first part of the above *Mari* passage could be describing how to preserve the reflexive strength of a composite bow when stored *after* a battle is over. They note, "[t]he limbs are warmed to soften the horn, pulled back into a reflex and then tied in place."[13] The second part of the above passage might, then, suggest that the warrior would take his bow—still wrapped—*en route* to the battle location. But once prepared for battle, composite bows could remain strung for a longer period of time over the course of the conflict.[14]

In the mid-seventeenth century BC, chariot units were still relatively small and mainly used against enemy foot soldiers. As chariot warfare gained popularity, armies increasingly began to encounter larger enemy chariot forces on the battlefield. Between the middle of the fifteenth century BC and the beginning of the fourteenth, Egyptian and Mitanni armies deployed units that numbered in the thousands. At the Battle of Kadesh, in the thirteenth century BC the Hittite and Egyptian armies both deployed roughly 3500 chariots each.[15]

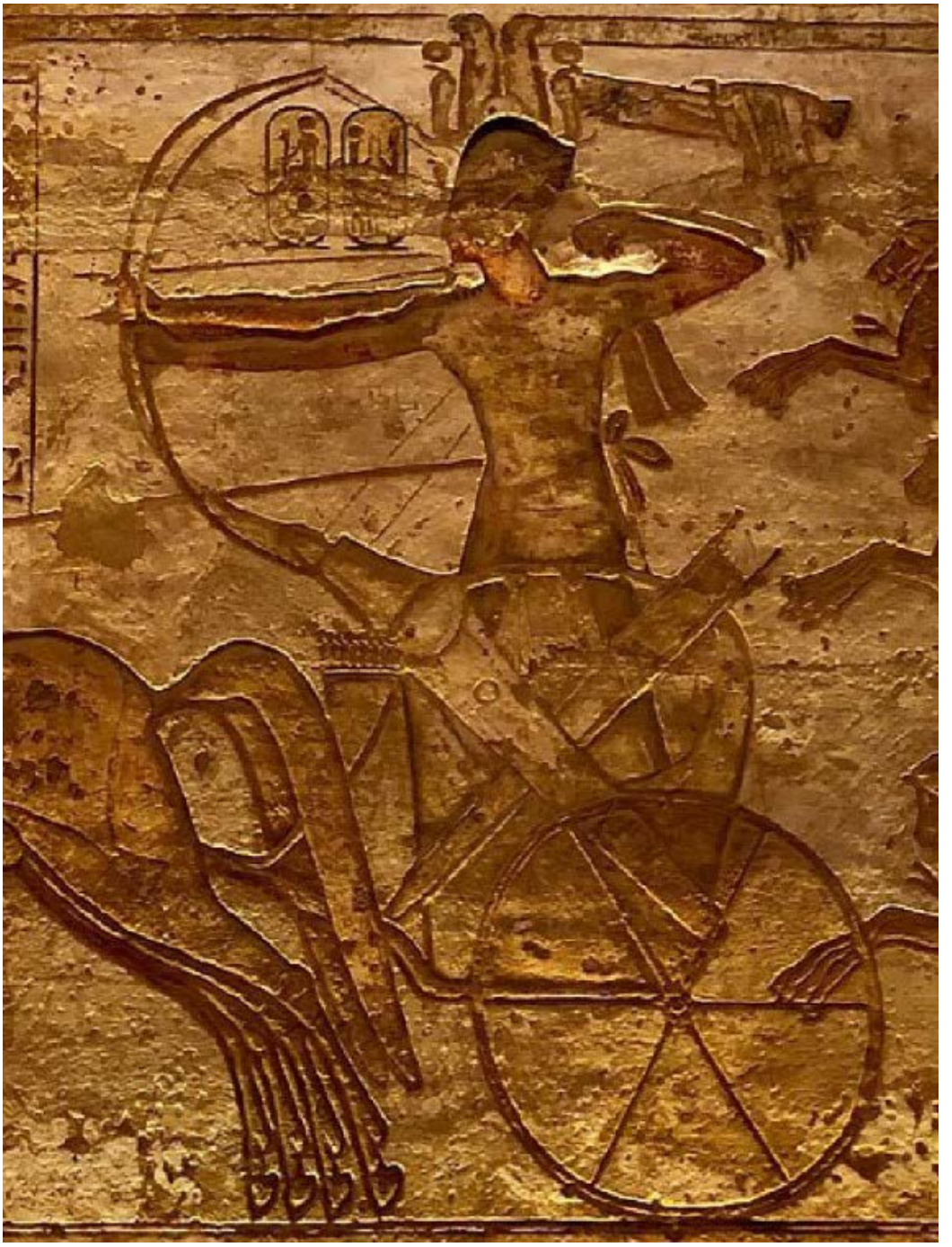

Figure 2: Ramses II accompanied by another archer (barely visible) at the Battle of Kadesh. Note the axle at the back of the chariot's carrying platform, rather than toward the center like that of the Asiatic empires. [Relief from Abu Simbel. Licensing: Creative Commons.]

Despite the extant evidence, reliefs and inscriptions are not always clear as to how chariots were strategically employed. One issue that the historical and archaeological communities often grapple with is whether armies used the chariots as battle taxis to transport chariot warriors to and from the battleground, or whether they used them as mobile firing platforms. Could both strategies apply?

Egyptian chariots typically carried a crew of two—a driver and an archer. The most significant improvement they made to the cab in the XVIII dynasty (1550–1292 BC) was moving the axle to the back of the wagon (see Figure 2). Doing so forced them to create an overall lighter machine, since the axle's new position would have made a heavier chariot more difficult for the horse to drag around. The rear position of the axle also guaranteed a sturdier base from which the archer could fire arrows—often while the driver steered the machine at high speeds. But these chariots were only effective on flat terrain, which Egypt did not have in abundance. Although the topography of Canaan and Syria was variable, they had more flat open plains on which to wage a chariot battle.[16] Because of this, one can postulate that the Egyptians, being aware of the threat coming from the northern kingdoms, improved their chariots to function more effectively in the more available level land of the Near East, where both Thutmose III and Ramesses II confronted their Asiatic enemies.

Positioned in massed formation, the Egyptian chariot units acted as a screen for the infantry who were preparing their tactical maneuver. The chariot archer presumably began firing arrows from a distance to confuse the enemy. The infantry archers followed suit. Once the enemy was close, the infantry archers retreated and allowed the axmen, swordsmen, and spearmen to charge the enemy and engage them in fierce hand to hand combat.[17]

At this time, the chariot archer—who also carried axes and javelins on board—joined the infantry in close combat, but their mission was also to protect the driver who was continually busy steering the chariot to break the enemy line. Because of this, it seems unlikely, as historian Richard A. Gabriel states, that chariot warriors participated in the battle by dismounting the cab.[18] This would have left the driver unprotected. The reliefs at Abu Simbel and Thebes showing the chariot reins tied around Ramesses II's waist while launching arrows seems questionable (see Figure 2)—he could not direct the horses from his waist! Such reliefs may have symbolized, as historian Alan Richard Schulman suggests, "a badge of rank," likely to exalt the pharaoh's bravery.[19] A more reasonable scenario would have chariot warriors participating in the conflict from their mounted position while also protecting the driver. However, given the speed and maneuverability of the Egyptian chariot, they might have used the vehicle as a battle taxi to rescue wounded soldiers.[20] If this is the case, then it seems likely that a chariot warrior could dismount the cab to give room to an injured fighter. When making a quick escape off the

battlefield, the chariot driver would not have needed as much protection as when he was in the middle of a bloody conflict. Meanwhile, the chariot warrior who dismounted the cab remained on the battlefield to fight.

The primary offensive unit of the Hittite army was the chariotry; their vehicle was the heaviest in the ancient Near East (though perhaps somewhat lighter than the early Sumerian war vehicle). Placing the axle below the center of the carrying platform made the cab strong enough to carry a larger crew and easier for the horses to drag around (see Figure 3), but their heavier weight still made them extremely cumbersome to maneuver.

The Hittite chariot carried a team of three (a driver, a shield-bearer and a warrior). The shield-bearer's function was to protect both the driver and the fighter, as well as himself. That the Hittite chariot warrior did not carry bows seems to depend on the reliefs of the Battle of Kadesh. These reliefs show some Hittite chariot fighters carrying lances, but none carrying a bow. However, scholars must keep in mind that the Egyptian artist would have intentionally portrayed a weak enemy on the defensive against Ramesses. The in-

Figure 3: Relief of Hittite war chariot showing the more central position of the axle. [Museum of the Ancient Orient, Istanbul Archaeological Museums. Licensing: Creative Commons.]

scriptions for the Battle of Kadesh state that the enemy ruler stood "averted, shrinking, and afraid."[21] Nevertheless, while the Hittite chariot warrior *did* use both the composite bow and the long thrusting spear, his predominant assault weapon was the spear. Perhaps, like the early Sumerian chariots, the heavy weight and slow maneuverability of the Hittite chariots made them less conducive to bowmen than to spearmen. Spears were much more effective in close engagements as thrusting weapons.

Apart from the Kadesh engagement there is no other indication from history that the Hittites ever used a three-man chariot crew in warfare again. This has led Hittitologist Trevor Bryce to assume that the three-man crew might have been a one-time strategic tactic against the Egyptians.[22] The extra body weight would have surely made an already heavy chariot more difficult for the horse to lug around and less steady while in motion; not what an army needs when up against the highly maneuverable Egyptian chariot. However, a three-man chariot crew might have made it possible for one of the chariot warriors to dismount the cab and engage the enemy alongside the infantry, since the chariot's shield-bearer was still available to protect the chariot driver and himself while the driver continued to operate the cab. There would have also been other weapons available on board the chariot for the shield-bearer to use when and if necessary. Nevertheless, if Bryce's assessment is correct, then perhaps the disappointing draw at Kadesh, coupled with the great loss of life and their ultimate retreat, could have led them not to burden their chariots with the added weight of a third warrior in future battles and, thus, had to readjust their future military strategies to better ensure certain victory.

Despite the weapons of the chariot warriors, the Hittites typically used the chariot *itself* as the primary assault weapon. Historian Robert Drews states that the chariot driver would bumrush the opponent's vehicle while the chariot warrior would stab the enemy with his lance.[23] If employed effectively the shock tactics of the Hittite chariot paved the way for the infantry. Armed with long thrusting spears, short stabbing daggers, and bow and arrows the infantry emerged to finish the enemy.[24]

Though not quite as unwieldy as the Hittite chariot, the Canaanite chariot was also heavy. Like the Hittite chariot, the axle's position was below the center of the carrying platform to take the weight off the animal. Although Canaan offered some level plains, their topography also had rocky ground, hills, mountains, forests, and glens. This kind of landscape made shock warfare from ambush necessary. The Canaanites (a confederation of multiple city-states in the Near-East) had to intercept the enemy at a time and place that was not ideal for them.[25] Ambush tactics would have been a problem especially for the Egyptians given the fact that the Egyptian chariot could only perform well on level ground; it was no doubt intentional on the part of the Canaanites to ensnare the Egyptians—on uneven terrain—since the Canaanites would have known

of the very agile, light-weight Egyptian chariot and hoped to stop them before they reached the flat open field.

Depending on the strategic operation of the campaign, the Canaanite chariot cab could carry two, sometimes three men—all armed with the composite bow as well as heavy spears and clubs. However, as with the Hittites, the heavy weight of their chariots made it less effective to use them as mobile firing platforms from which to fire arrows. While spears and clubs would have supplemented this deficiency—since they could be used in close combat—employing their chariot as a battle taxi would only have been possible if there were two warriors on the chariot with the driver. As with the Hittites, only when they operated their slower-moving chariots with a three-man crew, might one warrior have been able to dismount the cab to fight alongside the infantry—who were also heavily armed with spears, archers, and swords. This would have made it possible for the remaining chariot warrior to protect the driver.

Much of the information regarding the military organization of the Mitanni comes from the *Nuzi* Tablets, unearthed in Nuzi, an ancient city located near the Tigris river in Mesopotamia. They record the history of the Mitanni with information regarding the social, economic, military, and legal issues of their daily life.

Like the landscape of Canaan, the terrain in Syria was variable (flat, hilly, etc.). Because of this, the Mitanni also needed to create a machine that would be proficient on all grounds. The problem was that their construction to that end rendered them as heavy as the Canaanite chariot and therefore performed less effectively overall. Occupied by a two-man team, the strategic employment of the Mitanni chariot relied heavily on careful consideration of the terrain they were fighting on. Their less than perfect performance may be the reason why the chariots carried an arsenal of two composite bows, two quivers of arrows, a shield, and a lance. Gabriel suggests that the tactical role of the Mitanni chariot warrior was not to fight in close quarters; that they likely used the bow *and* the lance either from a distance as firepower or in passing close engagements.[26] However, it seems unlikely that the Mitanni warrior would surrender a lance by using it as firepower. Gabriel's second suggestion seems more plausible. Given the middling performance of their heavy chariots, the Mitanni chariot warrior would have more likely wanted to hold on to their lances as long as possible and thus used them primarily from their mounted position as thrusting weapons in passing close engagements. Perhaps they used them to stab prostrate, vulnerable enemy soldiers the way the Hittites did.[27]

Against the fast-moving Egyptian chariot, research seems to suggest that all the Asiatic armies had to rely mostly on ambush. Both the Mitanni and the Canaanite chariot's ability to ride on uneven terrain gave them an advantage over the Egyptian chariot, but the meeting place for the Battle of Megiddo in 1481 BC was the Esdraelon

Plain, which was mostly level ground—perfect for the fast-moving Egyptian chariot. Because of this, Thutmose III knew that they would try to ambush him, so he took the road they least expected him to take—the narrow, treacherous Aruna Road—to meet them for battle. Detouring into the Kina Valley he outwitted his enemy and emerged onto a level plateau behind the enemy forces and laid siege to their armies.[28]

The Battle of Kadesh, on the other hand, did not end well for the Egyptians. In his quest to gain control of Kadesh, a fortress town in Syria which was under the dominion of the Hittites, Ramses II let his guard down. His first mistake was believing the Shosu Bedouin scouts when they told him they had defected from the Hittites and were there to warn Pharaoh of the location of King Muwattali's army. His second mistake was failing to conduct reconnaissance to make sure these men were telling the truth. In fact, the Bedouins were spies sent by the Hittite king to scope out Ramesses' position. Believing Muwattali and his army were still far off in the land of Aleppo, Ramesses and his Amun division crossed the Orontes River and set up camp in a position north-west of Kadesh. That is when he received bad news. Some Egyptians discovered the truth after severely beating the two Bedouin scouts, who told them that Muwattali and his army were in hiding just across the river. Since many of Ramesses' military divisions were still far off, he sent two of his officials to give haste to the Re division, which was the closest. Unfortunately, it was too late. The Hittite army ambushed them and gave them chase as they fled toward the Egyptian camp where Ramesses and his division were still setting things up. When the Hittite chariotry arrived they surrounded Pharaoh.[29] Both Megiddo and Kadesh demonstrate examples of ambush tactics used by the Asiatic armies: one successful, the other disastrous.

Once in the middle of a conflict, warriors and their animals faced the very real prospect of a gruesome, bloody death. Weapons were not enough to win a battle. For this reason, armies protected their troops and their horses with body armor. Some armies were more heavily protected than others depending on the effectiveness of their weapons. Both the Mitanni and Canaanite warriors as well as their charioteers and their horses were much more heavily armored than their Egyptian counterpart, which could have provided them with an advantage for survivability. Their chariot's lack of maneuverability made it necessary to use the cab for shock warfare, which made it essential to heavily protect not only their charioteers but their horses as well.

The following passage from the Nuzi texts refers to the distribution of scales, probably for a certain member of a Mitanni chariot unit, and confirms the number of scales needed to create their formidable armor:

> 5 hundred scales for its body (armor), 5 hundred scales for its sleeves, 2 hundred ditto (i.e., scales) for the helmet. 1 thousand 2 hundred bronze scales, Ninki-tesup took.[30]

Once fashioned, the Mitanni bronze-scaled armor included a long skirt, a sleeved coat, and a helmet. A thick leather belt protected their abdomen. Unlike the Canaanite and Mitanni infantry, only the elite Egyptian infantry and their charioteers wore bronze-scaled armor. Archers and spearmen wore textile armor, but none in the Egyptian military appear to have worn helmets.[31]

The Kadesh reliefs illustrate the Hittite warriors without armor. Ramesses' *Poem* of the Battle of Kadesh reads, "I made the plain of Kadesh turn white, (so that) there could not be found a place to set foot because of their multitude."[32] This refers to the white tunics worn by the Hittite warriors. However, author Mark Healy suggests that the white textile robes may have covered a bronze-scaled robe.[33] Their horses, after all, wore bronze-scaled armor. Why would the warriors not have been equally protected?

The most frustrating aspect of interpreting military warfare this old is that ancient inscriptions often glossed over the tactical role of the infantry. The Nuzi texts, for example, describe the make-up of the Mitanni infantry, but they do not describe how they operated strategically. Hence our overall understanding of infantry organization and tactics in the ancient world is woefully deficient, and requires careful conjecture. Drews mentions that this lack of information exists because the infantry's contribution was insignificant and undervalued.[34] This seems to be an overstatement. Regardless of the lack of mention, recruitment of the infantry would not have been so heavy and their armor and weapons not so substantial had their contribution not played so vital and significant a role in combat.

Egyptian reliefs often show the protagonists in varying sizes. Ramesses II, for example, was always much larger in size than his infantry[35] (see Figure 4). However, this had nothing to do with the order of importance in military tactics. It simply reflected the social hierarchy of their society—foot soldiers were not aristocrats. Furthermore, inscriptions of victory were not so much a way to broadcast the details of the battles the way the media might do today. They were simply a way to glorify the bravery of their leaders. Hence, in antiquity the infantry suffered lack of mention not because their tactical contribution was insignificant, but because of their lower social status and the unrelenting need to lionize the king. In fact, downplaying the role of the infantry might not have only been a way to memorialize the valor of the warrior king, but to minimize his blunders.

The foolish actions of Thutmose's soldiers when they stopped to plunder the enemy camp at the Battle of Megiddo, caused the enemy to flee to the protection of the city and forced Thutmose to lay siege to Megiddo for months rather than storming it triumphantly. Perhaps to lessen the humiliation of allowing this to happen, Thutmose's inscriptions highlighted his troops' reckless behavior and boasted of his own ability to redirect their priorities and ultimately win the battle. When the enemy soldiers had barricaded themselves within the city walls of Megiddo, he commanded his troops saying, "Be-

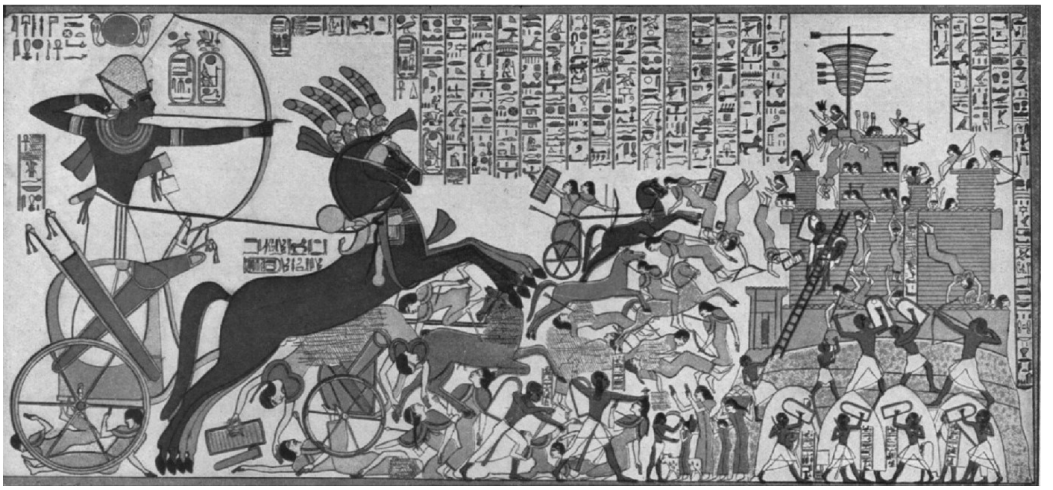

Figure 4: Ramesses II at the Siege of Dapur (1289 BC) showing the image of the pharaoh larger in size than all the other fighters in the battle. [Rendered from a mural in Ramesses' temple in Thebes. Licensing: Public Domain—authorship unclaimed.]

hold, [every land] is given [to my Majesty according to the command] of Re this day; for every chief of every northern country which has revolted is within it; for it is the capture of a thousand cities, the capture of Megiddo. Capture ye, capture ye, thoroughly!"[36]

Unlike the infantry, the chariotry received more mention in the historical record. Chosen from elite members of society, the *maryannu* were often much closer to the inner circle of their leaders. *Maryannu* is an ancient word for chariot-mounted hereditary warrior nobility used in many ancient societies during the Bronze Age, including those covered in this study. Their mention in the historical record was therefore necessary to magnify the rulers and their campaigns. The high social rank of the Mitannian *maryannu,* for example, was a direct result of their expert military skills in chariotry. Their zealous ambition proved to be a valuable asset that could sustain an elite corps of charioteers in warfare; success, in fact, was more dependent on their skills, than on the construction of the vehicle and the types of weapons they used.[37]

Although chariot forces received more mention in the historical record than the infantry, this study has shown that their overall strategic employment was not uniformly efficient among the combatants. While all chariot warriors carried a bow and arrow, only the Egyptians were able to effectively use them on vehicles traveling at high speeds, since their chariots were lighter in construction. This allowed them to begin disrupting the enemy's line of defense from a distance. The slower-moving, heavier Hittite, Canaanite, and Mitanni chariots made it difficult to use them as mobile firing platforms, but they were very effective for ambush tactics. As long as they fought each other, the Asiatic empires used military tactics that

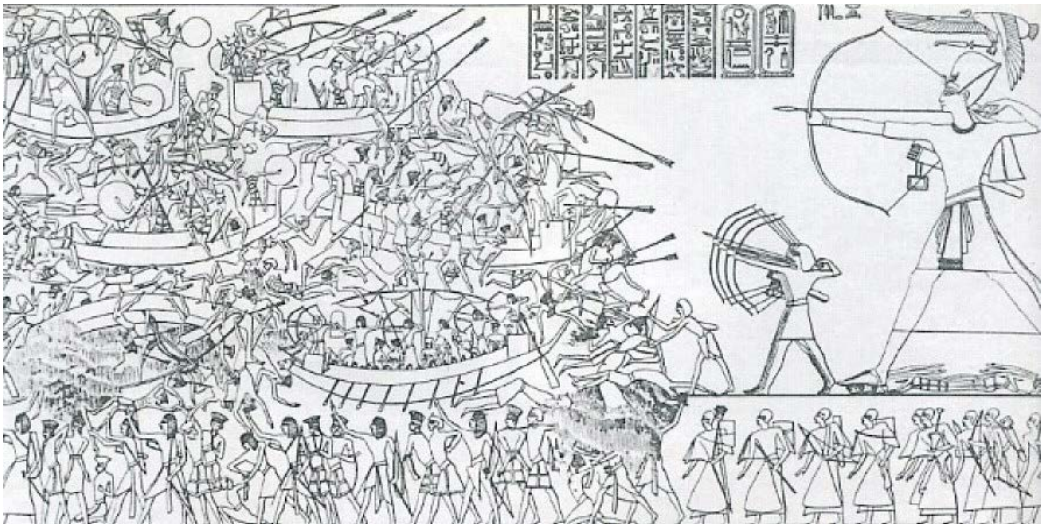

Figure. 5: Depiction of Ramesses III and his army fighting the Sea People in their ships at the Battle of the Delta (c. 1175 BC). Note this image shows no chariots. [Rendered from a relief of the mortuary temple of Ramesses III at Medinet Habu. Licensing: Public Domain.]

would have been mutually similar, but when fighting against the Egyptians, a change in their military strategies was necessary. They knew that the Egyptian chariot was only effective on flat terrain so their first defense tactic would have been to stop them before they reached the open battlefield.

The end of the Bronze Age effectively brought an end to large-scale chariot warfare in Western Asia. By 1200 B.C., archaeological evidence indicates that a wave of devastation had befallen many societies of the Mediterranean and the Near East, which ushered in the Iron Age (1200 BC–550 BC). Several empires collapsed including that of the Mitanni and the Hittites. While scholarship has not fully understood the reasons for this fall, they do know that it brought about a major change in battle tactics. Most encounters during this time involved foot soldiers. The reliefs at Medinet Habu show that Ramesses III's (*r.* 1186–1155 BC) aggressors (among them the Libyans and the Philistines) were mostly infantrymen, supported by very few chariots. Ramesses himself fought mostly on foot and won victories by relying more heavily on foot soldiers[38] (see Figure 5). The solidarity of infantry forces in the Iron Age depended on every warrior playing his part in massed formation. These kinds of battle tactics required an efficient chain of command to control them. This was very different from the Late Bronze Age, where infantries relied on the leadership command of the king and the protection of his chariots. Throughout the rest of the world, dependence on chariots would slowly continue to wane over the ensuing centuries as reliance on cavalries, which were much more agile than the chariot, became more widespread.

About the Author

Mary Jo Davies is a graduate of history, having earned her Master's Degree in ancient and medieval studies from American Public University in 2018. She spends her time researching and writing articles for publication in scholarly journals. Although she writes on a variety of topics, her primary focus is on warfare in the ancient world. Apart from her journal contributions, she is compiling her published articles into a book encompassing warfare from the late Bronze Age through the end of the Roman Republic.

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25 Gabriel, *Thutmose III*, 78.

26 Ibid., 70.

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33 Healey, *Qadesh 1300 BC*, 25.

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