

Horses in war: A history

By NATALIE GARCIA COLORADO STATE UNIVERSITY

The sound of thundering hooves fills soldiers' ears as their horses flatten out, lower to the ground as the increased stride length gobbles up terrain. Wind whips by, chafing faces, stinging eyes, and a wild cry tears from the lips of hundreds of men. The enemy is in sight, and the soldiers are closing in. Lances level and mounts maneuver toward any slight gap between the shields of the opponent's infantry. Five strides to close the distance. This is what man and beast have trained for, practicing for years to meld into one body, one mind, one spirit. Three strides, targets picked, aim taken. One stride, all hell breaks loose. Lances aim true, piercing the enemy through armor and shattering with the impact; others go wide missing the target and enemy infantry swallow rider and horse. Comrades and horses are screaming, injured, fallen, and bloodied. The surviving force wheels to the right, flying back to the reserve forces to regroup. A cavalry shock charge just turned the tide in a raging battle.

The domestication of the horse led to societal advances. Horses were first kept as a source of meat and milk, much like cattle. Although impossible to date exactly when horses were domesticated, there is archeological evidence dating from as early as 4000 BCE that indicates horses were used for riding or driving.² It is suspected horses were domesticated before this, but horses, unlike dogs, underwent very few physical changes with the process of domestication making it impossible to determine an exact time period when horses became more than just food.1 However, according to Dr. Sandra Olsen, who has extensively researched the history of the Botai people in northern Kazakhstan, it is probable horses were domesticated and ridden in this region as early as 3600 BCE.1 It is also believed that the Sredni Stog peoples of the Ukraine were the first to ride horses based on archaeological evidence indicating horses were ritualistically buried with bit-like equipment.1 This type of burial indicates horses were already of extreme importance.

Although difficult to pinpoint exactly when and where riding first occurred, the earliest artifact resembling a bridle was found in the Eurasian steppes north of the Black Sea. At some point, early man rode the horses, perhaps to move with the herd being kept as a food source. Regardless of why, control was needed. The first bridle had cheek pieces designed to hold the bit (a soft mouthpiece) in place.¹ This technology was slow to spread; horses were first used as beasts of burden or to pull carts. With continued horse-human interaction, the concept of riding slowly spread, giving rise to a powerful weapon - mounted warriors. Cavalry revolutionized warfare. Warriors were faster, more mobile, and deadlier when combined with the power and strength of a horse. Horses were a huge technological leap from standard infantry.3 This advance was the most revolutionary until the invention of firearms. For nearly six thousand years, the outcome of battle was dependent on the strength, speed, and heart of the horse. Napoleon was quoted saying, "Without cavalry, battles are without result."4 From Asia Minor, across Europe, into Africa, and eventually into America, horses changed the world one hoof beat at a time.

Horses were the ideal candidate for mounted warfare. Elephants could not adjust easily to various climates and were more difficult to maneuver through tightly wooded areas. They were used with success in some regions but were hard to control and had a nasty habit of stampeding when frightened.³ Rhinoceroses were not sufficiently

intelligent, and dogs were less effective due to their size. Camels were also used with success in some areas, having greater endurance and increased ability to survive on minimal forage and water; however, they lacked the speed of horses.² Horses flourished in many locales around the globe and were readily available. Mounted warfare fell into two main categories, heavy cavalry and light cavalry. This lethal combination made the superior cavalry the deciding factor in a skirmish

Cavalry allowed warriors greater mobility and speed and increased their ability to outflank an enemy.⁴ However, cavalry was most effective in high quantity, so it was of utmost importance to have stud farms or breeding programs to maintain the stock of horses. Depletion of horse stock was the downfall of many great societies, even the Romans, who in later years had to rely on conscripts from surrounding tribes to field an adequate supply of both horses and men to maintain the cavalry.³ At first, horses used for cavalry purposes were quite small. This was a predicament as people were also shorter; however, larger horses were able to carry more weight in arms and armor, and as such, were more desirable.² Caring for these horses was difficult, but the horses were such a valuable asset, they were well-treated and given the best care possible at the time.⁴

War horses needed to be highly trained to perform the maneuvers necessary for survival. One of the oldest training records, written by Xenophon, dates to the first century CE.⁵ This document, the Ars Tactica, has a section specifically on cavalry. Xenophon's work is one of the first documented sources urging riders to understand the mentality of the horse. He wrote about the art of horsemanship, emphasizing the importance of daily care of the horse to keep it happy and healthy.5 Much of Xenophon's advice is still followed today. The cavalry section of the Ars Tactica deals largely with the maneuvers warhorses performed. The practice for these maneuvers was carried out in a festival-like setting, with civilians gathering to observe the impressive display of charging, wheeling, and synchronization essential for an effective cavalry attack.5 This created a safe environment in which to practice. Practice was crucial because a cavalry unit needed to function as one. Practice gave the horses time to acclimate to the noises of battle and to learn it was possible to charge without injury into what appeared to be a solid mass of opponents. Group training played to the herd instincts of the horse, fostering a competitive nature useful on the battlefield. Romans started their horses at three years old, training them in round pens similar to what we use today.⁵ High expectations were placed on these horses, but Xenophon knew that horses should be rewarded with kindness for a job well done and with a quick reprimand for misbehaviors in order to be successful.

The term warhorse implies a sturdy, reliable, fearless steed, all unnatural qualities of a horse. Horses are herd animals that flee for survival. Although, a horse, if forced into a threatening situation, will fight using teeth and hooves, it generally prefers to make a speedy escape from that which frightens it. An effective war mount would have great trust in his rider and be accustomed to the sights, sounds and scents of the battlefield. These horses would need years of training to become highly efficient fighters. Horses also have a great memory for past experience. All preparatory training would have been specifically designed to be trauma free. The very act of charging into a solid

SOCIAL SCIENCES

looking object is unnatural to the horse; they are not stupid animals and are adept to stopping on a dime. Taking the time to introduce a horse to everything encountered on the battlefield was a key aspect of preparation. The adrenaline rush of a cavalry charge may have helped mask pain and stress the horses encountered in battle. If horses associated pain and fear with charging to battle, it would be difficult to convince the horses to charge again.⁵

Horse care varied with different cultures. Mongol horses led the most natural lifestyle, spending much of their time grazing. The Mongol horse ate only grasses, unlike horses that are kept in stables and are supplemented with grain. This, coupled with the terrain of the steppes, made these horses tough and hardy, perfectly suited to Mongol style warfare. Most other nations kept horses much as they are today, in large pastures, supplementing their diet with grain and hay. This meant cavalry upkeep was too often dependent on supply trains bringing in hay, grain and necessities. Training methods varied based on preferences to warfare. Some horses were taught to lie down and wait for their riders to return so soldiers could fight on foot. Horses were taught to kick, bite in order to maim, cripple, and kill the enemy. In Europe, stallions were preferred, as it was sometimes easier to emphasize these behaviors. All warhorses needed to move easily off leg pressure and give to the bit.4 They needed skills like jumping, surefootedness, ability to traverse all terrain, as well as basics like standing to be mounted. In addition, horses had to be accustomed to the noises of battle, be willing to charge at an enemy, and have enough trust in their riders to respond quickly and correctly in any situation.

Classical dressage movements such as the levade, volte, and capriole evolved from training. Circles were used to make the horse more supple, increasing its strength and flexibility, while rollbacks allowed for a quick directional change.⁵ Horses were taught leads and put through exercises that combine aspects of dressage, reining, crosscountry jumping, polo, and police horse work. These horses needed to be able to rear and strike at the enemy with ease, to travel great distances at speed, and to carry a man with armor and weaponry. This was incredibly taxing on the horse and required years of training and practice to reach the high level of understanding and communication necessary for success. In battle, there was no time to correct a rowdy mount; it would make both horse and rider an easy target. Horse and rider had to work together to keep each other safe. Trust in his horse allowed the rider to worry less about judgment calls over terrain and battle position. A horse that knew his job could anticipate the proper maneuvers needed, allowing the rider to maintain focus on the battle. Horses were bred for speed, stamina, and size, all necessary traits to be able to carry a man in armor and ideally some horse armor as well.

Battles could be easily won if there was an element foreign to the enemy's horses. For example, elephants used in the Punic Wars were terrifying to horses that had never seen nor heard them before. It would be nigh impossible to get these frightened horses to charge in the orderly manner in which they had been trained. Horses are very sensitive to details and often time bolt before realizing what an object might be. The introduction of something as huge and foreign as an elephant was sure to make even the staunchest and most experienced warhorse uneasy. The Sarmatian people carried a standard that had a metal head and long windsock-like tail that produced a wailing sound when the wind whipped through it. These devices were very successful at frightening horses if they had never seen them before, and as such, were copied. Costuming armor by adding wings, plumes, facemasks, and other material that would change the appearance of a rider to an enemy's horse was a good way to throw off opponents. Introducing a variety of unusual objects to a young horse without

exposing him to undue trauma was the only way to train a war mount that was not panicky in nature.

Cavalry is separated into two categories. Light cavalry was comprised of quick horses paired with an accomplished archer or javelin thrower. Lightning fast attacks could be made on the enemy, zooming into range and peeling away with a parting shot before action could be taken. Light cavalry was propagated by nomadic groups, especially those of the steppe cultures. Light cavalry was useful for conducting raids, scouting, spying on the enemy, distracting the enemy, and using hit-and-run, blitzkrieg-type attacks.³ Protection from injury depended on speed and surprise. The horses' tack was simple, often just a saddle pad or blanket and a soft bridle. The riders would bring the essentials needed to travel great distances in the wild, and the horses would be accustomed to covering many miles, even at speed. Traveling lightly without a supply train eliminated the risk of being cut off from food and necessities. Light cavalry was less expensive than heavy and practical for traversing inconsistent terrain between battles, especially if soldiers were accustomed to foraging for food while on the move. Light cavalry carried a sword or a weapon suited for close combat in addition to projectile weaponry.

Genghis Kahn offers a brilliant example of the effectiveness of light cavalry. As a nomadic group, horses were used to travel, giving rise to well-trained sturdy endurance horses. The Mongols were a terror on horseback; they were highly accomplished riders. Famous for the "Parthian," or parting shot, Mongols could fire their bows while retreating. These horses would be the modern endurance type, hardy and well-conditioned, although they were shaggy and stocky in appearance. Generally, the Mongol warrior had his own string of horses so they could be switched out to allow traveling at greater speed. Each warrior was responsible for his own animals.

Heavy cavalry mounts are the stereotypical warhorses. These horses were large draft types, trained to charge into enemy lines carrying a fully armed man with a lance and long sword for close combat. Both horse and rider wore more armor, as both were in the heart of a raging battle. Speed was not essential: This cavalry attack focused on power. Horses needed a calm, obedient disposition. Shying out of a line of charging horses would cause disaster in the ranks. The primary heavy force beginning circa 200 CE was the cataphract, a cavalry soldier equipped with leather lined scale or chain mail, lance and long sword.² These horses were not able to charge as quickly or to retreat as quickly as they were severely weighted down. Stirrups were helpful, especially as armor became increasingly heavy. The stirrup increased the force of a lance on impact, and the rider would not easily be unhorsed in a collision. Heavy cavalry developed as horses were bred for increased size and stamina. One of the downfalls of a heavily armored horse and rider was heat. Overheating could put the cavalry in jeopardy if the horse was overtaxed. Heavy and light cavalry were used in conjunction as each had a specialized role. Heavy cavalry was very intimidating to an enemy, and one charge could be enough to break enemy lines.

Roman horses in the first few centuries CE were equipped with both saddle and bridle. Other groups did not use saddles, but rather a simple blanket or pad. The Roman saddles were constructed with four horns, one at each "corner" of the saddle. These saddles did not fit the horses well and had to be used with many layers of padding to prevent chafing and soreness. Another common early saddle type had a wooden arch in both front and back connected with leather that formed a pillow on each side of the horse spine. Both types had an ill fit that made horse care paramount, as weakening or injuring the horses could cause the loss of a campaign. The front two horns on the saddle created a seat belt of sort, passing over the rider's thighs

SOCIAL SCIENCES

and securing him in place.⁵ Increasing the length of these horns so that more of the thigh was covered increased the stability of the rider much like a stirrup would. Longer horns were more dangerous: If a horse were to flip over in battle the rider would be trapped. The rear horns of the saddle stabilized the rider on impact. When a lance charge met resistance from the opposing army, the rider would have to absorb most of the shock.⁵ The rear saddle horns made that absorption easier and decreased the chance of losing one's seat.

The Roman bridles were similar to those of modern day. Metal bits were utilized, and remains of many different varieties have been found in archaeological digs. These bits were often harsh on the horse. According to Ann Hyland in her book Training the Roman Cavalry, these bits were necessary for a warhorse to operate at his highest performance. The author tried a replica of these bits on her own horses and found that with a light hand it worked very well for horses with less sensitive mouths. These bits had a port with sharp edges which lay flat unless the rider lifted his hands. This activated the port, driving it into the palate of the horse's mouth. The rings of the bit were fit with metal spokes which turned as more force was applied, pressing on the outer sides of the horse's mouth. This was to keep the horse directly on the bit, eliminating any chance of avoiding contact and thus being less responsive on the battlefield.⁵ There was also a metal piece that went under the chin, making it uncomfortable for a horse to open his mouth. This bridle tells us one of three things: The Romans were exceptional horsemen with steady hands even in the heat of battle, the horses the Romans used were particularly hardmouthed, or, although unlikely, the horses were very tolerant of their mouths being ripped open. Hyland hypothesizes that in the heat of a battle with the horses galloping toward a row of pike men or enemy cavalry (which would be against the horse's nature of flight), these bridles would be necessary to ensure the horses paid attention and did not break ranks. Snaffle bits, bits with rollers, bits with different ports, and curbs could also be found from the same age. Reins were later coated in metal to prevent the enemy slashing them.1 Some cultures did not use bridles but rather a neck rope, steering the horse by applying pressure opposite the side in which the horse was to travel.¹

Horseshoes were not developed until the sixth century CE.⁷ The Romans created what was called a hipposandal, a device similar to the sandals they wore. The hipposandal could be secured on the hoof with leather straps. It was not widely utilized, functioning more on an as-needed basis. It is thought leather or woven booties of some sort may also have been used in Asia before the horseshoe was invented. Although some debate the usefulness of horseshoes even to this day, for horses expected to be running over hardened surfaces and rough terrain, horseshoes can minimize soreness. Horses have relatively small feet in comparison to the amount of weight they bear, and injury to one foot can end the useful life of any mount. The foot is sensitive to mere pebbles, let alone broken bits of lances, arrows, dropped knives, and mutilated armor all likely to be underfoot in a battle. Studded horseshoes could give grip over icy or slippery grounds, turning the horse into a veritable all-terrain vehicle. Horseshoes were made of bronze originally, having six nails and a slightly scalloped appearance.7 Over time, the shoes were made of heavier iron and were less scalloped with eight nail holes. Horseshoes have remained common for horses in heavy work to this day.

The stirrup is a highly controversial invention. Some sources claim the stirrup was necessary for any cavalry charge to be successful, while others point out that lance charges were common before the invention of stirrups.³ Although possible to charge with a lance while riding bareback, the stirrup lent security and increased striking force of attacks to the rider. The earliest form of the stirrup was a toe ring,

utilized in India possibly by the Huns.3 This ring would have been uncomfortable and impractical if wearing shoes. The modern stirrup is thought to have originated in China circa 300 CE. It is mentioned by a Chinese general writing in 444 CE.³ The stirrup was slow to spread, taking hundreds of years to migrate east. If it had made a huge difference in battle outcome, it would have spread quickly, especially as cavalry units were noted for adopting technologic advances.3 The most useful part of the stirrup is ease of mounting. Although jumping on a horse bareback can be easily accomplished, adding armor and weapons increases the difficulty and complexity of this task. Not only is a higher jump required to hoist the added weight on to the horse, but also added care must be taken not to injure horse or rider with weaponry. Wasting time mounting would be unacceptable for efficacy in attacking. Warriors had to be ready quickly, and horses had to be accustomed to being mounted from any angle. The stirrup would decrease time needed to mount and therefore the time needed to prepare for a charge. Stirrups also increased the safety, comfort, stability and reach of the rider. Stirrups allow a rider to lean to the side to deliver a sword blow, much like polo players today are able to twist out of their saddles to strike. The slow spread of stirrups may have also been due to many cultures viewing them as an admission of weakness.³ German tribes were known to go out of their way to engage parties who were using stirrups to prove they were an unnecessary piece of equipment.3

Cavalry charges were conducted in a variety of manners, but for heavy charges there was always a line of riders. The charge of heavy cavalry is known as mounted shock combat.8 The overall formation may have been that of a wedge, rhombus, or square, but if the first line consisted of multiple horsemen, these horses were expected to charge at the same pace with the riders traveling toe to toe with their neighbors, creating an intimidating semi-impregnable wall of horseflesh and steel. When the cavalry carried shields, it was possible to protect yourself, your neighbor and your horse by staying in tight formation, but to work effectively, it required horses to travel at similar speeds and be of like size. Longer lines with less depth were ideal as it was difficult for horsemen in the rear to push through their comrades in the front, unlike infantry who could easily do so. Unfortunately, the horses were the easier target in these charges. Wedge or rhombus formations were considered more effective, as it was easier to change the direction of the charge.⁵ Square formations were much more difficult to turn. Wedges were formatted so that the heaviest horse with the most armor and experience led the charge getting progressively lighter toward the rear.⁴ This allowed the cavalry to take advantage of the slightest gap in enemy lines: If the first horse could squeeze through, the following horses would widen the hole until the enemy's line had broken. The last 300 meters of a charge closed at a canter or gallop, taking less than one minute to reach the enemy.4 When pistols were used in the charge, it was carried out at a trot to allow time to reload the weapons. It was customary for infantry to follow cavalry in attack; foot soldiers could easily slip through the holes created by the cavalry. If multiple charges were called for, three to four cavalry lines were utilized. After the first line of cavalry collided with the enemy, if possible, the cavalry wheeled to the right (shields were carried on the left, so turning right would lend the most protection) and reformed behind the last line.8 This was a difficult tactic for an enemy on foot to withstand. The goal was to force the opposing infantry to break rank and flee. Cavalry against cavalry were more likely to stay engaged in close combat, especially if equally matched in skill and weaponry.

Many different tactics were used to oppose cavalry. A solid phalanx of interlocking shields and pikes was effective. It was difficult to coerce the enemy's horses to charge into a solid wall with sharpened projectiles if the warriors could stand their ground. Celtic warriors

would actually fight as individuals against a horse, trying to slash the horse in the legs or belly to bring down the rider. This required great skill and daring and was not a commonly employed technique but was highly effective when properly executed. Often when charging opposing cavalry or infantry, it was a game of who would flinch first. Anti-horse obstacles could be used by the infantry (flooding the terrain, setting pikes into the ground to create an angled wall of spikes, digging deep trenches) to force the cavalry to attack from a certain direction.8 Deception and innovation were key when fighting cavalry or when leading a cavalry unit. Feigning retreat was a common tactic, and if properly performed, it was possible to convince the enemy to give chase, break ranks, and thus be rather easy to defeat with an organized charge.8 Leadership was often the determining factor of success, more so than quantity of soldiers. With the advancement of the long bow and sturdy pikes, it was not difficult to take down the horses with archers. Since killing the horse meant that the rider was often killed or disabled, the horse was an optimum target. Although possible to protect both the horse's face and chest with some armor, it was impossible to encase the legs in a manner that offered both adequate protection and freedom of movement. At the peak of longbow prowess, even human armor was not impervious to penetration.

Germanic warriors had unique cavalry. The heavy used larger, heavier lances, subsequently requiring larger horses to bear the weight. These lances were so heavy that neither the rider nor the horse was armored.9 These lances were balanced on the left shoulder to allow the horses to wheel away to the right. The large lances Germanic warriors used caused crushing impact and deep penetration of enemy forces. Germanic groups also had specialized horse stabbers and hewers. These fast runners kept pace with the horses (which charged at a canter, not a gallop). Horse hewers were armed with curved knives specially designed to rip through tendons with a pulling motion.9 They were often the squires of those involved in the mounted charge, and both mounted and foot warrior would work together to bring down the enemy. Horse stabbers would face a charging horse, attempting to roll between the horse's front legs and gut it mid charge. To avoid entanglement, these warriors fought in minimal clothing, often simply winding a cloth around their forearm to guard against blows.9 Germanic cavalry served as the personal guards for the Roman Empire for many years due to the cavalry's excellence in combat.10

Between 200 and 400 CE, cavalry quantity increased dramatically.² The standard heavy cavalry used strong mounts capable of bearing a complete set of armor. This included scale or chain mail, the inside of which would be lined with leather, helmets covering most of the rider's face, and some armor for the horse. Soldiers wearing this heavy set of armor did not carry a shield and were called clibanarri ("ovenmen") by the Romans, as wearing such equipment was very hot! Tack included a breastplate and often a crupper or haunch harness to help hold the often ill-fitting saddle in place. Horse armor varied based on size of the horse, weight of the fully armed rider, and available technology. Early horse armor was simple and consisted of a heavy cloth covering made of canvas, leather or quilted fabric. Chamfrons, or faceplates, were used to protect the horse's face and could be made of leather or metal. Some chamfrons also had protective eye coverings, or horns, spikes, and decoration to make the horse look fearsome and to allow the horse's head to function as a battering ram. As horses got larger and were able to carry additional weight and as armor became more advanced, more pieces were added. Breastplates, made of scale, chain, and eventually plate armor, were common. Chain mail was fantastic because it was lighter than plate and was ventilated while still offering a good deal of protection. Full horse armor covered the neck, chest, and haunches and could be made of lamellar scale armor,

chain mail, plate, or a combination of all of these. Armor was padded to provide extra comfort.

The weapons carried by cavalry members varied, but bows, lances, spears, javelins, swords, knives, long-handled axes, maces, and even quarterstaffs were all possible weapon choices. The horses had to be accustomed to any weaponry the rider might choose to wield. Composite bows, or re-curve bows, were suitable for mounted use, and some were specially designed to be shorter on the bottom half to allow ease of use. These bows were often reinforced with buffalo or cattle horn at the tips to protect the bows from the strain of the re-curve. Javelins and spears could be thrown from the horse while lances were used to impale the enemy during a charge. Lances ranged in length from twelve to almost twenty feet. Longer, heavier lances had to be wielded two-handed, making it necessary for the horse to respond entirely off leg commands. Lances evolved to have either a counterweight on the back, allowing the lance to be gripped further back and lending an increased reach to the warrior, or to have a second tip on the butt end in case the front was broken or became lodged in an enemy. Lances could be held in a variety of positions, two-handed crossing the body diagonally with the point past the horse's left ear, over the shoulder held with the thumb pointed to the rear, out to the side with the thumb pointing forward, or couched - tucked under the arm. Sword type differed greatly, but the swords were always long and were designed to give maximum striking force. Some cavalry swords had a wrist strap to ensure they were not lost in the battle.4 Horses also carried quivers or sheaths attached to their saddles to store the weapons the rider was not using.

The major downside to cavalry was transportation and care of the horse. The logistics of transporting a large number of horses was a nightmare that would plague cavalry leaders endlessly.\(^1\) Assuming the average horse at this time stood 15 hands high and weighed about 1500 pounds, each animal would need roughly 25 pounds of feed per day (including both hay and grain). Coupled with the amounts of fresh water needed, transporting horses required a lot of preparation. Care also needed to be taken in removing manure and supplying enough horseshoes, nails, farriers, and people to care for the horses.

Medieval cavalry is the common image that comes to mind when thinking of horses in warfare. Jousting tournaments were simply practice for the battlefield. Early tournaments were a free-for-all in which groups of up to 200 knights tried to capture each other for ransom. The only governing rules were designated areas for rest, rearming, or holding defeated foes. Financial compensation was the general motivator for tournament participation.\(^1\) Tournaments offered a chance to show off; horses were decorated in ornate cloths with the knight's personal crest. High backed saddles were used in this period to give the knights greater leverage and stability. Lance skills were practiced in tournament games such as trying to collect small rings on the tip of the lance or hitting a quintain, a shield-like apparatus that spun when struck, more points being scored with a higher number of rotations.

The number of knights decreased drastically in the seventeenth century, but heavy cavalry was still the predominant source of charge, and light cavalry the predominant source of protection, pursuit, and reconnaissance. Horses had been bred for increased size, but with the increased gun power, horses that were light and fast were the new ideal. Armor was decreased, with horses wearing none and soldiers wearing only breast and/or back plates. Riding had become an art, with the foundation of the Spanish Riding School in the mid 1500s and a later addition of a French riding school in Versailles. Polish cavalry, French cavalry, and Italian cavalry were the dominant players in the Renaissance era and into the eighteenth century. By this

SOCIAL SCIENCES

time, cavalry was standardized for the most part, with the only significant differences being between eastern and western cultures. Eastern cultures focused on speed, with sudden, unexpected attacks to wear down the opponent. They were much better horsemen, using the horse on a day to day basis, with each soldier caring for his own mounts. In western cultures, horses were cared for by stable boys, and only the wealthy could afford such a luxury. The horses were used for offensive shock charges and were not needed in times of peace.

Later notable uses of cavalry are found in America, the land founded upon horseback. Hernando Cortez proclaimed, "[N]ext to God we owe our victory [in the new world] to our horses." The native populations who had never seen such a creature, held horses in awe, as the horse had been absent from North America for thousands of years. Native Americans were quick to learn to ride the horse and became renowned for their skills on horseback, taking excellent care of their mounts and achieving a high level of partnership with minimal gear. The Native Americans fought in a style similar to that of the Mongols, conducting raids and making heavy use of archery. The war paint the horses wore often symbolized the feats the horse had achieved. For example, a left handprint on the horse's right hip indicated the horse had brought his rider safely back from battle after the rider had been seriously injured. Tail braiding was common to prevent the enemy from grabbing it or it catching while traveling. Manes were often sheared short so not to obstruct projectile launch.

As guns became more prevalent, change in tactics was needed. Some cavalry fired their pistols first then charged into a battle with swords drawn, others dismounted to fire their guns, and some waited until close enough to ensure accurate fire before shooting. Horses were expected to charge into heavy musket fire, but if they made it to the infantry square, they were often impaled on bayonets. The chaos and smoke from gunpowder made controlling cavalry even more difficult. Uniforms became a standard in the late 1600s to help distinguish friend from foe, and most forces had designated runners to communicate between battle groups. The runners had uniforms that designated them as non-combatants to attempt safe passage through the clashing armies.

The American Civil War era cavalry was established in 1833. It consisted of dragoon regiments with the later addition of mounted riflemen. At the onset of the war, the South held the advantage as horses were more commonly ridden there, while in the north horses were more often driven. The confederate soldiers used their own horses, which were considerably superior to those supplied by the union.1 Horses were used not only in the war but also to help expand the western frontier, combating Indian raids. Cavalry was generally followed with artillery and was used for scouting missions, for covering the flanks of the main army, and for the general disruption of the enemy. The U.S. saw the cavalry as an unnecessary expense, and just as ancient cultures had, struggled with the time and money needed to raise, train, and maintain a strong cavalry force. As the Civil War wore on, remounts were scarce, and the cavalry was not nearly as well cared for as it should have been; horses were gathered, trained, then shipped to the needed location, often to people who had insufficient knowledge, skills, or abilities to ensure they were properly maintained. Soldiers who traveled great distances with their mounts (30-35 miles a day in some cases, a number that had not changed since the time of Alexander the Great) found that traveling lightly allowed the horses to cover more distance without tiring as quickly. Many horses were lost due to disease and inferior care. Cavalry weapons at this time consisted of sabers, revolvers, and the occasional rifle or shotgun. Multiple firearms were common, reducing the amount of time needed to reload. Soldiers fought both mounted and on foot, sometimes even training horses to lie down to present a smaller target while shooting. By the late 1800s, cavalry was more effective if the soldiers rode to the site of battle then fought on foot. This change was slow to take place, as it was hard to forgo the glory of being a cavalry soldier. Although cavalry use declined drastically with the invention of gunpowder, regiments were still functioning into the early twentieth century. Advances in guns are what truly ended the use of cavalry. When guns took several minutes to reload and were horribly inaccurate, a quick cavalry charge could still be successful. Mechanized guns ended this. Machine guns that could fire hundreds of rounds in minutes meant there was no hope of a successful cavalry charge. Horses were used through World War II but could not compete with trench warfare, barbed wire, and powerful new firearms. The 5,000 year reign of the horse came to an abrupt end in a blast of gunpowder and smoke.

What made cavalry so special was not the armor, arms, or warriors' skill, but the speed, strength, and heart of the horse. Horses gave their lives for their human riders, an ultimate sacrifice. Cavalry has never been forgotten and still influences modern life. Any film set in those 5,000 years is sure to include a cavalry charge of epic proportion. Although the exact tactics may not be accurately recreated, nor the armor or arms, film is still able to capture the raw power and frightening force the cavalry emitted. Inevitably, the charging cavalry saves the day. Jousting tournaments still occur with people dressed in armor from the period and charging to victory. Classically trained dressage horses still perform the levades, caprioles, and voltes that were created as part of the training for cavalry mounts. Mounted shooting competitions showcase the age old skill of maintaining a steady hand while riding. Polo players score points with strikes similar to those which cleaved enemy infantry. Lessons are given without stirrups to improve a rider's seat. People ride using only one hand, leaving the other to perform tasks such as roping, swinging a mallet, shooting a gun, or simply opening a gate. The skills of the cavalry soldier are still needed by those who ride, no matter the discipline. Though mounted warfare may no longer exist, the influence, power, and glory of its reign will never be forgotten.

References

 $^1{\rm The~International~Museum~of~the~Horse}$ at the Kentucky Horse Park. The Legacy of the Horse. http://imh.org/legacy-of-the-horse. (9/22/2010).

²Anglim, S. (2002) Fighting Techniques of the Ancient World: 3000 BC - AD 500. St. Martin's Press. Pg 13-247.

³Sidnell, P. (2006) Warhorse. Continuum Books. Pg 14-331.

⁴Jarymowycz, R. (2008) Cavalry from Hoof to Track. Praeger Security International. Pg 33-244.

⁵Hyland, A. (1993) Training the Roman Cavalry: From Arrian's Ars Tactica. Sutton Ltd. Pg 1-224.

⁶May, T. (2007) The Mongol Art of War: Chinggis Khan and the Mongol Military System. Westholme. Pg 36-182.

⁷Cohen, R. (1996) "The History of Horseshoes." *Dressage Today*. http://www.equisearch.com. (11/3/2010).

⁸Bennett, M. (2006) Fighting Techniques of the Medieval World AD 500-1500. St. Martin's Press. Pg 6-198.

⁹Speidel, M. P. (2004) Ancient Germanic Warriors. Raitledge. Pg 65-277.

¹⁰Speidel, M. P. (1994) Riding for Caesar. Harvard University Press. Pg 20-196.

¹¹Grbašic, Z. and Vukšic, V. (1989) The History of Cavalry. Facts on File.

¹²Lynn, J. A. (1990) Tools of War. University of Illinois Press. Pg 75-209.