

THE CHANGING IMPORTANCE OF HORSES WITHIN THE CELTIC SOCIETY

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Based on archaeological evidence, horses have been utilized, initially as a food source, by humans since the Upper Paleolithic. It was not until ca. 2500 B.C. when horses in Europe were domesticated for draft animals and other purposes. With the domestication and utilization of the horse led to dramatic changes in how different societies operated. This paper will be looking at the Celtic society to address the changing importance of horses. Three key aspects will be examined: warfare, religion, and the maintenance of social structure. This study will lead to an understanding of how significantly the role of horses changed over time within the Celtic society. This paper discovered that the role of horses went from being mainly used in the capacity to establish status to a more active role throughout the whole framework of Celtic society not just exclusively for status purposes.

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INTRODUCTION

The people known as the Celts left behind a clear and recognizable material culture making them easy to study and distinguish from other cultures during the period of time from 1200 B.C. to mid-first century B.C. or A.D. depending on the area. The height of the Celtic Civilization was during the Hallstatt Period which occurred from around 1200 B.C. to 475 B.C. and in the La Tène Period which occurred from around 475 B.C. to mid-first century B.C. or A.D. depending on Roman conquest of the region (James 1993:20; Konstam 2001:20). The Celts were a militaristic society known for their elaborate metal work and especially for their skill with handling horses (Cunliffe 1997). As would be expected from a militaristic society, much of the material culture that was left behind is related to warfare. Celtic material culture is particularly well known from burial contexts, where some individuals had elaborate burials, where depending on the period, the individual was interred on a wagon or chariot along with their weapons, horse gear, and other objects (James 1993). Horses played an integral part in changing the methods of warfare. For instance, horses made it possible for warriors to cover ground at a rapid pace that had not been seen previously (Green 1992:66). Through this material record we can see that the Celts established strong bonds with their horses.

Horses were highly regarded and are considered to be a defining trait of the Celtic society. This study examines three different aspects that define Celtic society and its relationship with horses; warfare, religion, and the creation of complex social structure following the introduction of horses to Celtic culture. Through studying these three main aspects of society, it

is possible to understand the changing importance of horses in Celtic Society. There will be several outcomes of my research that will help to provide more insight on the operations of the Celtic society with regard to use and role of the horse.

BACKGROUND

Who are the Celts

The term, Celt encompasses a large diverse group of people spread out over vast region of land and time. The Romans had several names when referencing to the Celts; Celtae, Celtici, Galli, or Galatae. The Greeks also had several names in reference to the Celts; Keltoi, Keltai, or Galatai. Some other names that were used interchangeably were Gauls and Galatians (Haywood 2004:5-6; King 1998:9; Ritchie1985:7). The Greek's definition for the word 'Celt' meant people living in Europe north of the Mediterranean and the Alps in Northwest and Central Europe; Greeks generally referred to them as barbarians (Haywood 2004:5; Megan 1986:5; Green 1986:1). The Celts can be defined as an Indo-European group linguistically and the Celtic language can be divided into two parts P-Celtic and Q-Celtic (Haywood 2004:8). The Celts are classified as a warrior society (Cunliffe 1997). Regardless of the vast region of land that they encompassed, tribal division and variations, the Celts still maintained a commonalty through their material culture, social structure, and religious beliefs (Allen 2001:4).

The Celts were a decentralized society that never became a unified nation, and can be defined as a tribal society (Haywood 2004:4). The Celts were a ranked society more comparable to chiefdoms in the modern Anthropological idiom (Eluere 1993:30; James 1993:20; Allen 2001:6). The best description on how the Celtic territory was structured is by using the Roman's

description. They had small territorially based sub-tribes called Pagi. The pagi were kin groups or extended families and clans. Several pagi would come together and create a larger tribal unit. These tribes then were governed by chiefs but the chiefs had limited powers. Decisions were made by general consensus of free men (James 1993:53). The Celtic class system consisted of a Chief at the top, next the warrior aristocracy, after them were the Druids, then the merchant class and specialist craftsmen, and lastly the commoners. Another level below commoners provided sometimes was for slaves (Haywood 2004:35). The Celtic economy consisted of subsistence farming and long distance trade with places like the Mediterranean region (Haywood 2004:38).

The physical appearance of the Celts was very important within their society and also very noteworthy to the Roman and Greek historians if the amount of attention they gave to describing the Celts is any indication. Textiles do not survive well within the archaeological record but there are some instances within Celtic sites that textiles were either found or impressions of the textiles remained to help verify what the ancient historians described (James 1993:64; The British Museum). Ancient historians commonly provide relatively the same general description with regard to the Celts physical appearance. They were tall, possessed great physical strength, fair skin, blonde or red hair, men of status had facial hair such as beards or mustaches, adorned with jewelry, and colorful, checkered clothing (Greenough 1898: xlvi; Allen 2001: 21; King 1998:15; Ritchie 1985:13). It is believed that their appearance and dress was a way for the Celts to establish their status and wealth within the society especially for the male warriors (Allen 2001:20). Some of the Celtic tribes in Britain were known to have painted or tattooed their bodies with a blue dye made from woad (Allen 2001:20). One piece of jewelry commonly worn by the Celts was the torc; it is believed to be used as a status symbol

(Greenough 1898: xlix; Allen 2001:21). The Greek historian, Diodorus Siculus, gives on two occasions a very detailed description about the Celts physical appearance:

The Gauls are tall of body, with rippling muscles, and white of skin, and their hair is blond, and not only naturally so, but they also make it their practice by artificial means to increase the distinguishing color which nature has given it. For they are always washing their hair in lime-water, and they pull it back from the forehead to the top of the head and back to the nape of the neck, with the result that their appearance is like that of Satyrs and Pans, since the treatment of their hair makes it so heavy and coarse that it differs in no respect from the manes of horses. Some of them shave the beard, but others let it grow a little; and the nobles shave their cheeks, but they let the moustache grow until it covers the mouth. Consequently, when they are eaten, their moustaches become entangled in the food, and when they are drinking, the beverage passes, as it were, through a kind of strainer... (King 1998:15)

[They] wear striking clothing, tunics dyed and embroidered in many colors, and trousers which they call braca: and they wear striped cloaks, fastened by a brooch, thick in winter and light in summer, worked in a variegated, closely set check pattern. (Ritchie 1985:14)

These ancient historians also took time describing the mental characteristics of the Celts. The image provided to the reader paints the Celts as arrogant, fond of idleness, very quarrelsome, always ready to fight, high spirited and brave to utter recklessness and contempt for death, lack of stability of character, and fickleness (Greenough 1898: xlviii). It should be noted and taken into account that along with these descriptions about the Celts the reader is provided with the writers' bias, which is clearly illustrated. This bias creates a distortion or misunderstanding of the Celts by stereotyping them as barbarians, which is exactly what the audience of these ancient historians wished to convey (Allen 2001:4).

Where are They Located

It is believed that the traditional homeland of the Celts is located in Central and Western Europe (Cunliffe 1997). The archaeological record reveals that between the fifth and third century B.C.

there was a great migration of Celts out of central Europe (Haywood 2004:19). The Celts moved south into northern Italy into the rich lands of the Po Valley (Allen 2001:6). Some Celts moved south east along the Danube Basin spreading east across the Carpathian Mountains and into the Ukrainian Steppes and south east into the Balkans, Greece, and lastly into Asia Minor (Haywood 2004:19). During the fifth and fourth centuries B.C. a group of Celts moved across north west Europe into the British Isles and during the early third century B.C. the Celts reach their maximum coverage when a group migrated into Macedonia (Allen 2001:6-7). During the fifth and fourth centuries the Danube River Valley was the principle corridor for communication between West Central Europe and East Central Europe. The Western Zone was from Danube River to the east fringe of the Alps which was occupied by indigenous communities sharing a generalized Hallstatt Culture. The East Zone was made up of the Great Hungarian Plain. The people on the Great Hungarian Plain were closely related to horse riding communities of the east and were part of the extensive Thracian Culture (Cunliffe 1997:78) (refer to Figure 1).

Time Period of the Celts

By looking at the material culture left behind by the Celts a chronology has been developed to classify the artifacts found and also to put the Celtic society into context with history. The Celtic culture can be broken down into sub-cultures. The main division in the chronology, that will be used, is between the Hallstatt and La Tène Periods. There is a great distinctive change in stylistic motifs, an increase in luxury items, and weapons found in the archaeological record in between these two periods. Some scholars differ in in the classification of assigning dates to the Hallstatt and La Tène Periods to rectify this ambiguity Simon James chronology of the Hallstatt Period well be used.

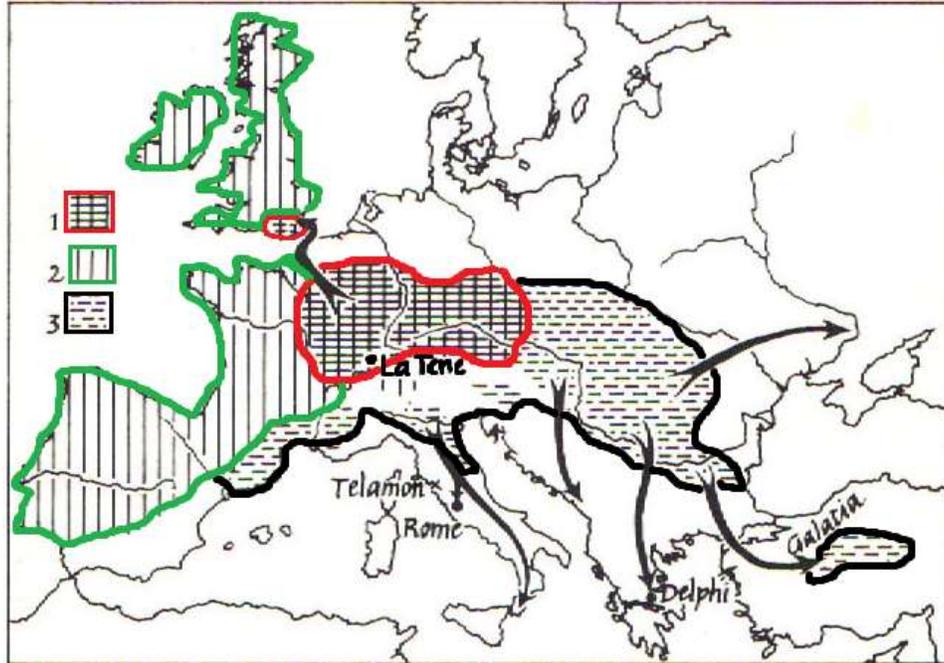


Figure 1. Map of Europe showing the main areas of Celtic influence:1. The heartland of the Celtic world; 2. Celtic expansion in prehistoric times; 3. Additional Celtic settlement in historical times.

Source: After Ritchie 1985: Figure 1

Hallstatt Culture

The Hallstatt culture is the earliest identifiable Celtic society in Europe spanning from the Late Bronze Age to Early Iron Age (Konstam 2001:16; Haywood 2004:7,12). The Hallstatt Culture spanned a period from ca. 1200 B.C. to 475 B.C. and it further subdivided into four periods A, B, C, and D (James 1993:20) (refer to table 1).

Table 1. Chronology of the Hallstatt Culture.

Phase	Absolute Dates
A	ca. 1200-1000 B.C.
B	ca. 1000-800 B.C.
C	ca. 800-600 B.C.
D	ca. 600-475 B.C.

Source: James 1993:20

The Hallstatt Culture originated in Central Europe and when finished in 475 B.C. its maximum extent to the west reached the coast of present day Portugal (Cunliffe 1997; Konstam 2001:16). This culture is named after the town of Hallstatt located in the Austrian Alps where a massive cemetery was found that had over 2,000 graves varying in social status (Konstam 2001:16).

The wealth of the Hallstatt Culture was from trade in salt and iron with its neighbors in the Mediterranean (Haywood 2004:12 Laing 1975:5). The social structure of this culture started as tribal groups that would later change during the eighth century developing into chiefdoms (James 1993:20-1). During Phase C, great changes in cultural activities start to occur. The Celts start building fortified settlements on hilltops more frequently and burial practices also start to change. Along with these changes the horse starts to be exploited more with regard to usage and establishing status, this was probably due to an increase in trade (Haywood 2004:18; James 1993:21). In the last phase, phase D, before its decline a cultural shift towards the west is seen, smaller hillforts are abandoned and replaced with a smaller number of hillforts that are larger in size (Haywood 2004:13). Also burials of this phase possessed the richest grave goods of this culture; these burials are commonly referred to as 'princely' burials (James 1993: 21).

The treatment of the dead is a key defining factor of both Celtic culture periods. In the Hallstatt Culture the Celts moved away from the common practice of cremation that the previous Urnfield people practiced around the seventh century B.C. suggests a change in Celtic beliefs and the aristocracy (Konstam 2001:16; Green 1986:123). The Hallstatt peoples created a rich and elaborate burial practice. This practice consisted of creating a wooden mortuary house that was buried under an earthen barrow or mound (Green 1986:3). Within the mortuary house the body was laid out upon a four wheeled wagon (sometimes partly dismantled) along with grave goods, consisting of such things as food, weapons, horse trappings (sometimes even the horses

were present), and other domestic items; this would mirror their earthly life in the Otherworld (Green 1986:3,123; Finlay 1973:28,30). Weapons interred in the burials were suited mainly for hunting or for show (Haywood 2004:13). It should be noted that during this period the sword design was a long, heavy iron slashing and hacking sword very different from the swords used in the La Tène Period (Green 1986:123; King 1998:28).

The other key characteristic between the Hallstatt Culture and the La Tène Culture is the art style. Hallstatt art reflected the natural world with realistic images of animals. The art style of this period is also known for simple geometric patterns of chevrons, circles, and strips (Konstam 2001:42; King 1998:28).

La Tène Culture

The La Tène Culture follows directly after the Hallstatt lasting from 475 B.C. to Roman Conquest during the mid-first century B.C. in Gaul and mid-first century A.D. in Britain (Konstam 2001:20). The La Tène Culture is also subdivided into three periods I, II, III (Konstam 2001:20) (Refer to table 2).

Table 2. Chronology of La Tène Culture.

Phase	Time Periods
I	Early fifth century B.C. to mid-third century B.C.
II	Mid-third century B.C. to late second century B.C.
III	Late second century B.C. to Roman Conquest - in Gaul mid -first century B.C; in Britain mid-first century A.D.

Source: Konstam 2001:20

The La Tène Culture is named after the finds found in the town of La Tène in Switzerland (Konstam 2001:20). The La Tène territory, by the time of Roman Conquest, incorporated all of the territory from the Hallstatt Period in addition to Britain and Ireland (Konstam 2001:20-1).

This culture is very different in comparison to the previous Hallstatt Culture. The fall of the Hallstatt Culture and the rise of the La Tène Culture are contributed to changes in the trading patterns with the Mediterranean peoples; trade during this period included items such as especially wine-drinking gear, and gold coins (Allen 2001:15; James 1993:29). During this period, fifth to third century B.C., a great migration across the Alps into the Po Valley region following the Danube River spread eastward all the way into Asia Minor creating their farthest expanse to the east (King 1998:27; Haywood 2004:19). The migration was probably a means to relieve social tensions caused by a rising population or a shortage of resources (Haywood 2004:19).

The burial practice of the elites in the La Tène Period like the Hallstatt Period is distinct. The elites of this period replaced being buried on wagons with being buried on chariots (Konstam 2001:54). This new type of interment has some variations in how it was performed. A common method was to dig a rectangular pit and then to place a chariot inside. Then the body was laid on top of the chariot in the flexed or in the fully extend position and grave goods were placed inside (Laing 1995:30). The other main way elite chariot burials were buried was for the wheels to be removed from the vehicle and set flat on the floor of the grave. Then both the body and the yoke, which was placed alongside the body, were laid on top of the wheels. The last step consisted of inverting the frame and the bodywork of the chariot over the body to provide a form of a canopy (Moscati 1999:608) (Refer to Figure 2).

Grave goods ranged from domestic goods, such as toilet kits, jewelry, and drinking vessels, to things like food, horse trappings, sometimes horses themselves, and lastly weapons (Green 1986:124; Moscati 1999:605-6; Laing 1995:34). It should be noted that there are increased number of weapons found in graves from this time period (Haywood 2004:18). Swords during this period saw a great deal of change. During the fifth through third century B.C. swords had a short, thrusting blade and during the second through first century swords reverted back to the long, slashing blade type (James 1993:75).



Figure 3. Artist reconstruction of Chariot burial.
Source: After James 1993:101

The art style of the La Tène Period was more elaborate fluid and complex than that of the previous Hallstatt Period. In the La Tène art style, there appears to be more of a foreign influence

than was present in the Hallstatt Period (Green 1992:128). This art style is more abstract and complex transforming from one form into another; for instance, leaves become faces and the head of human is placed on the body of a horse (King 1998:22, 28). Art forms found in this period range from realistic animal and plant depictions to geometric swirls, whorls, and trefoils to the abstract forms (King 1998:28; Green 1986: 167-8).

Horse

Horses have existed since the Pleistocene (Clutton 1987:80). The horse species comes from the *Equidae* family; they are grazing herbivores that prefer areas of temperate, well-watered grasslands (Clutton 1987:82; Olsen 1987:13). The Celtic Iron Age horses were small, fast, and tough animals (Green 1992:20). It is believed that horses were first used as a food source in the upper Paleolithic and it was not until ca. 2500 B.C. in Europe that they were domesticated, and even earlier in other regions, for draft animals and other purposes (Anthony 1987:76). The domestication of the horse created a revolution in transport, trading, and warfare (Bokonyi 1987:30; Green 1992:66). Traveling by horseback made it possible for a person to travel two or three times farther and faster per day than it would be possible on foot (Anthony 1987:80). The horse fulfilled a variety of functions within the Celtic society; it was a companion to its owner, a draught/pack animal, a method of transportation (hunting, warfare, riding), a symbol of wealth, used in religious purposes, and a food source (Green 1992:20, 50, 57, 66). The influence of horses on religion and warfare will be discussed in greater detail later on in this paper.

The maintenance of horses took a certain level of wealth to feed and maintain the health of the horse; this alone led to the creation of social divisions and hierarchy within a society (Green 1992:66). Feeding horses was a year round demand of hard feed, consisting of barely or

cereal grains and the 'Celtic bean' and depending on the season, additional food was added to the regiment: grass in the summer and hay in the winter (Green 1992:70). Another great expense to the horse owner would be the equipment needed to exploit the horses speed, agility, and draught ability. To ride or use a horse during battle, several pieces of equipment were needed including a bit, harness, saddle, horse shoes, sometimes chamfreins (head armor for the war horse), or a chariot with two sets of bits and harnesses; which were all richly decorated to help establish status and rank (Ritchie 1985:32, Green 1992:71-2).

There are several general characteristics that were needed to make a good war horse. A war horse did not need to be particularly fast but they needed to be compact and able to bear loads without undue stress. Also they needed to be short and stocky beasts with adequate ride and speed and capacity for endurance (Green 1992:67). Ponies were not good for battle. They were unstable and uncomfortable to ride because of the Celt's stature, but there were some Celtic tribes, mainly in Britain, which did ride them (Green 1992:67-9). The native horses of Gaul and Britain are small compared to Italian horses; so horse breeding was clearly an important part of the Celtic culture (Green 1992:69). Horses are not naturally aggressive creatures, but they can be in times of war; they could be trained to use their teeth and hoofs on an opponent (Green 1992:67). They are highly intelligent animals; they have the ability to reason and learn, and when on a march they could forage for themselves (Green 1992:67).

Religion

The Celts had a very rich belief system. They practiced polytheism, the worship of multiple deities, and there are over two hundred recorded names in the Celtic pantheon (Haywood 2004:42). It is possible that the number of deities is actually less than has been recorded because deities had multiple names and there were considerable regional variation (Green 1992).

Animals played an important role in the Celtic religion. The Celts believed in animism; the recognition of spiritual presence in all aspects of nature; for example trees, water, rivers, lakes, mountains, thunder, and the sun all possessed spiritual qualities (Green 1986:167-8; Green 1997:2). With regard to deities, animals sometimes represented them in iconography or deities embodied the characteristics of certain animals (Green 1992:196-7; Green 1986:33). Animals also played an integral part in the role of worship and cult practices (Green 1992:196). Animals were revered for certain attributes that they possessed; the horse for instance was revered for its power, beauty, swiftness, bravery in warfare, prosperity, fertility, and sexual vigor (Green 1986:174; Green 1997:2). Within Celtic religion horses also seem to have a close affinity with the sun (Green 1992:27).

Sacrifices had a significant role in Celtic religion. Sacrifices were generally material objects (especially weapons that were bent or broken on purpose), animals, and even people (Green 1992:92). Sacrifices can be found in graves, sanctuaries, and votive water sites like springs, bogs, and rivers (Green 1992:94,107; Green 1986:138). The Celtic religion had a priestly class called Druids but they were not just religious leaders but also leaders in civil matters such as education and legal matters (Haywood 2004:44; Allen 2001:20). The process to become a Druid took twenty years because they had to commit to memory a vast amount of knowledge dealing with a wide variety of topics such as religious lore, magic, medicine, law, astronomy, and tribal history (Haywood 2004:44). Their religious duties had them in charge of sacrifices, holding festivals for certain deities, and performing ceremonies in several areas; sacred oak groves, temples, and sacred enclosures (King 1998:52; Haywood 2004:44).

Epona

The Celtic goddess, Epona, is a multifunctional goddess best known and recognized deity to have ties to horses. Epona's name is etymologically linked to the horse (Green 1986:92). A wide spectrum of people worshiped Epona from civilians to warriors (Green 1992:204). Epona was believed to be the protector of the horse and its rider (Green 1992:205). She is also believed to be connected to the craft of horse breeding and a type of mother goddess with connotations to fertility because of iconography depictions (Green 1986:9-2; Green 1992:205-6). Epona is also associated with healing springs or thermal waters (Green 1986:92, 153; Green 1997:13). Along with her multiple functions she has multiple ways that she is depicted. Epona never occurs without the presences of at least one horse and is the one constant in all depictions of her (Green 1986:171). There are two main forms that depict Epona; the first is of her seated side-saddle on a mare, a foal frequently shown suckling or lying asleep beneath the mare and the second has her seated or standing between two or more horses (Haywood 2004:3). She was also depicted frequently holding corn, fruit, and bread and sometimes it is depicted in an offering dish that she is holding (King 1998:48; Green 1997:13).

Sky/Celestial Horsemen – Cult of Sky and Sun

This god is more obscure in its function within the Celtic society but it has clear ties to horses. It is believed that this god represents the dominion of life over death (Green 1986:58). Also venerated as the deity of both the sky and sun and perceived as a warrior, conqueror of evil and of darkness and death giving this god a dualist view (Green 1997:16). The depiction of this god is very distinctive. The Celestial Horsemen is depicted a couple different ways. The most common depiction is the sky god on a horseback rearing over and riding down or being supported by a humanoid monster with legs in the form of snakes; this depiction is usually found

on the summit of Jupiter Giant columns (Green 1986:61; Green 1997:17). The Sky horsemen are also depicted on galloping horses with a thunderbolt as a weapon and a solar wheel as a shield (Green 1997:18).

Horseman Cult

The Horseman cult was made up of equestrian warriors, this group was especially important to Celts in both Gaul and Britain (Green 1992:207). Gualish headhunting is associated with this cult and the tribes; Catuvellanui, Coritani, and Icenii of Eastern Britain especially, venerated this god (Green 1986:173; Green 1997:15). This horsemen cult is believed to have an outward military symbolism and has connotations of benevolent protection (Green 1997:14). The horsemen cult depiction is of an armored warrior mounted upon a horse (Green 1997:16).

Warfare

The Celtic society is known to be militaristic in nature especially in the La Tène Period. Warfare is embedded in their social system; to enhance status a warrior had to engage in acts of prowess, demonstrate ability to lead, provide context of acts of valor, and acquire loot for distribution from raids (Allen 2001:17, 26). Warriors had a variety of warrior gear weapons consisted of; swords, spears, slings, throwing clubs, and some had bows and arrows (these were not used as often). The Celts had several items of war gear that were designed for their protection consisting of; a shield, helmets, and chainmail. Even with all this Celtic Warriors are known for going into battle naked only wearing a torc and bracelets or armlets (James 1993:74-77). Ethnographic accounts from the Greeks and Romans help to establish what the Celts were like in battle. The Greeks and the Romans portrayed the Celtic warriors as ferocious, boastful, flamboyant, and impetuous. Greek historians wrote that Celtic warriors were madly fond of war, high spirited,

and quick to battle (Greenough 1898: xlvi). Also they assembled in bands without forethought and that their strength depends on the strength of their warriors and their numbers (Haywood 2004:47).

Animals played a crucial role in Celtic warfare. Horses were employed in the cavalry, chariot units, and in teams of horses and dogs fighting together (Green 1992:66). The Celtic warriors were renowned for their skill for fighting on horseback and in chariots; these two concepts will be explained in greater detail following this section (Green 1992). The Celts created a lot of noise before and during battle with war trumpets called carnazes, war cries, and boasting, and lastly the noise of the cavalry and chariots moving on the battle field (Green 1992:86). The strength for Celtic warriors in battle was the ferocity of the first onslaught but the weakness to their fighting was their organization or lack of it, if the first attack fail there is no counter attack planed (Allen 2001:28; Powell 1980:127). The fighting style of Celtic warriors was more individualistic than organized units; the Celts were known to engage in single combat as a way to limit hostilities and a way to gain prestige and status (Allen 2001:44; Green 1992:86).

Chariot

The invention of the chariot forever changed land transportation; being the first wheeled vehicles designed for speed (Anthony 2007:397). The Celts used chariots first on the continent, and then chariots fell out of popularity during the second century B.C. (Green 1992:84). Unlike on the continent the chariot would still be in use in Britain 150 years after its decline on the continent (Allen 2001: 47). Chariots are two wheeled vehicles that were pulled by two ponies or small horses and carried two people, the warrior and the charioteer (Cunliffe 1997:99). The chariot was not just used in battle but also used in funerary rituals (Cunliffe 1997:101). Scholars debate the

amount of use that chariots had in warfare but all scholars at the very least agree that if nothing else the chariot was used for battlefield transport some go as far as to compare it to a modern day taxi (Haywood 2004:45; James 1993:78).

The construction of chariots took a lot of skill, precision, and time. Celtic chariots were designed to be lightweight, fast, and easily maneuverable (Pare 1992:12). The frame was primarily made out of wicker and wood helping to make it as lightweight as possible (Green 1992:82). The platform was as far as we can tell about a meter square (3 feet 3 inches) just enough room for the warrior and charioteer to stand (Ritchie 1985:32). The platform had sides attached that were low double hoops of bent wood or wicker work, the front and back of the chariot was open for easy access, and the yoke and axle were attached to the bottom of the platform (Cunliffe 1997:99) (refer to Figures 3 and 4).

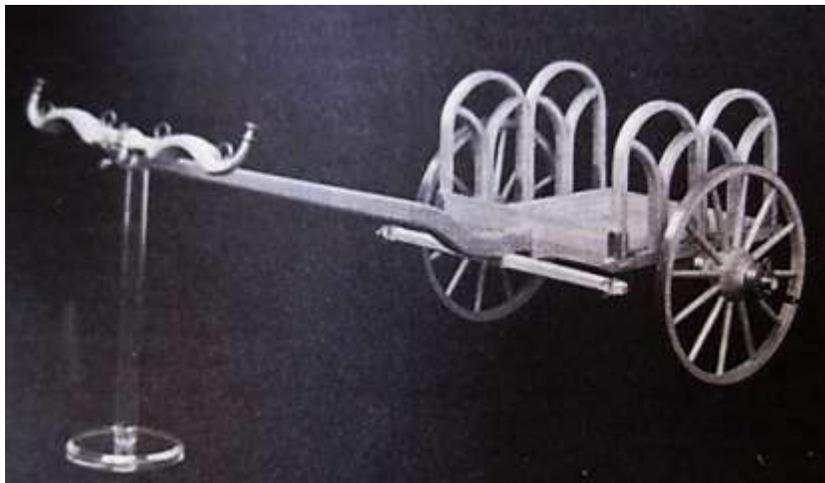


Figure 3. Reproduction of Celtic Chariot.
Source: After Eluere 1993:151

The spoked wheels alone were finely crafted pieces of carpentry. The wheel was created from a single piece of wood or felloe; bent to a circular shape with tapering end brought together

and strengthen with an iron tire (Ritchie 1985:32). Individually carved spokes were attached to the rim, one end attached to the outer wheel mortises and the other end attached to a multi-socketed central nave, which was carved and planed out of wood with hand tools (Anthony 2007: 397). The wheel was fastened to the axle by the use of a linchpin (Ritchie 1985:33) (refer to Figure 5).

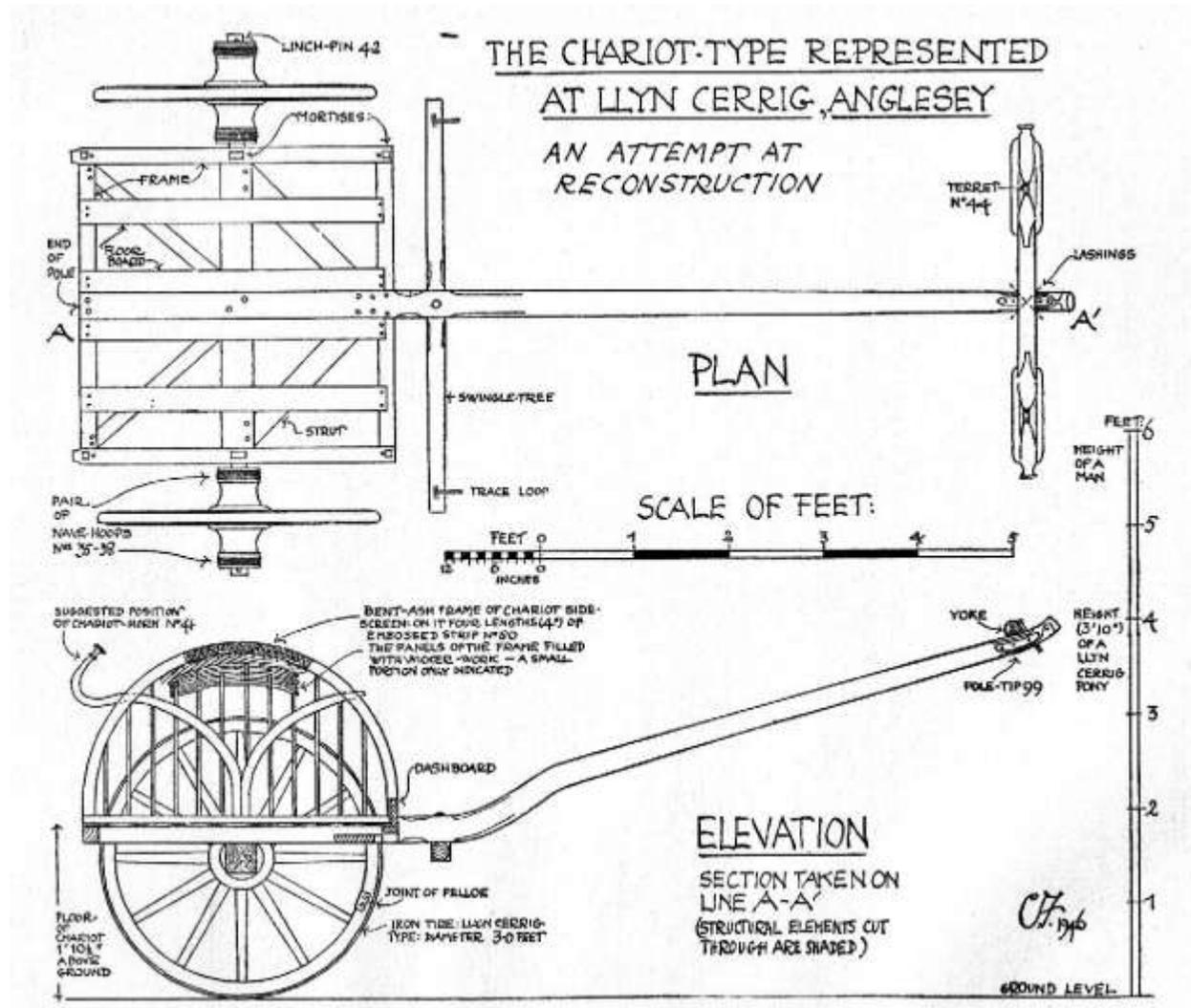
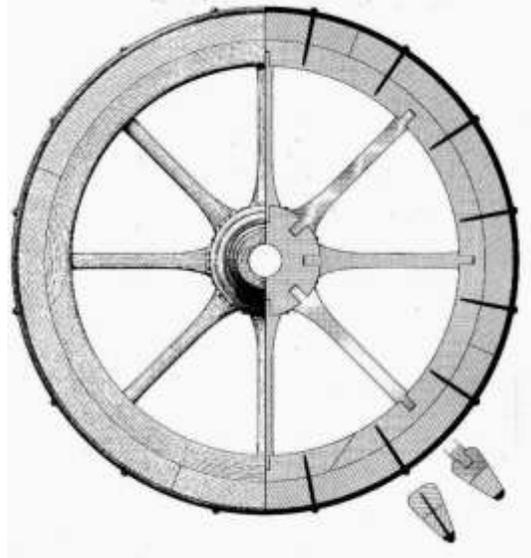


Figure 4. Plan and Elevation of British Chariot based on Llyn Cerrig and other Data. Source: After Fox 1946: Figure 13



*Figure 5. Example of wheel construction.
Source: After Pare 1992: Figure 57*

One of the most important parts to the chariot was the harness, bridle bits or snaffles, and the yoke since they gave the charioteer more control over the maneuvering the ponies (Ritchie 1985:32; Green 1992:82). Harnesses were richly decorated with inlaid of coral or enamel and had elaborate strap junctions (Ritchie 1985:32). The bridle bits or snaffles were comprised of three main elements; the central bar, rings at each end, and side loops or check pieces that attached to the rings and this is also where the reins are attached (Ritchie 1985:32). The yoke was made out of wood and had a series of bronze rings or terrets along it that the rings were threaded through (Green 1992:82) (refer to Figures 6 and 7).

As was stated before it is debated by scholars in how much usage chariots had in battle by the Celts. The little that is known comes from written accounts and iconography; primary from the reverse sides of Celtic coins (refer to Figure 8). Scholars commonly accept that the chariot carried two people, the charioteer who drove the chariot and the warrior. The warrior is believed to have carried spears or javelins and an iron sword and been of high status (Cunliffe

1997:99; Green 1992:82; Anthony 2007:404). The charioteer was believed to be a freeman not of noble status and possessed great skill of driving (Allen 2001:50; Green 1992:85, Cunliffe 1997:99). There are several ethnohistoric accounts that show different views or ways that Celts used chariots in battle.

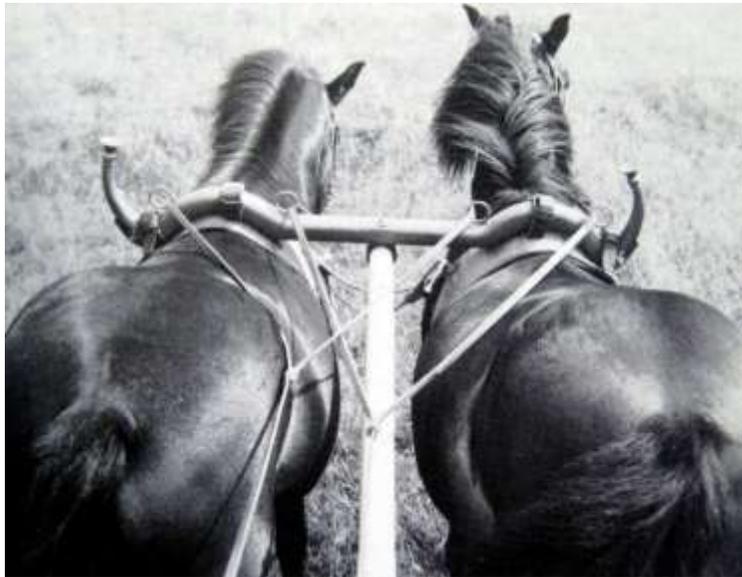


Figure 6. View from yoke pole of how the reins control the horses in a chariot.
Source: Ritchie 1985: Figure 15

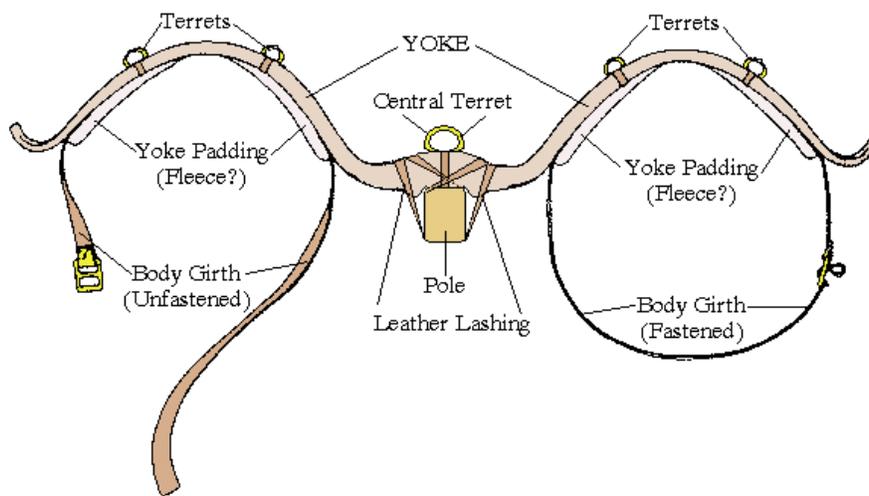


Figure 7. Shows how the horse was harnessed to the chariot yoke.
Source: Hayton 2006: Iron Age Chariot Burials



Figure 8. Reverse side of a coin depicting a Celtic charioteer and warrior.
Source: After Powell 1980: Figure 76a

They are as follows:

Diodours Siculus:

When going into battle the Gauls use two-horsed chariots which carry the charioteer and the warrior. When they meet with cavalry in war, they throw their javelins at the enemy and, dismounting from their chariots, they join the battle with their swords... They bring also freemen as servants, choosing them from among the poor, and these they use as charioteers and shield bearers (Ritchie 1985:31-2)

Julius Caesar:

33. The technique of chariot fighting is as follows. First they ride all over the field hurling missiles, and the terrifying horses and clatter of wheels is usually enough to confound the enemy. When they have worked their way among the squadrons of their own cavalry they leap down from their chariots and fight on foot. Meanwhile the drivers gradually withdraw from the battle and park their vehicles in such a way that if the charioteers are hard pressed by a numerous enemy they will have an easy retreat to their own side. In action, therefore, they exhibit the mobility of cavalry and the steadiness of infantry. Daily practice and training enables them to check their horses at a gallop down a steep hill, turn them, sprint along the whiffletree, perch on the yoke, and get back into the car in a flash (Caesar 1957:91-2)

Usual practice against Romans was to hurl the chariot at high speed into the slow-moving ranks of infantry, fire off a volley of spears, leap down into the slow-moving ranks of infantry, fire off a rapid volley of spears, leap down to engage in swift hand-to-hand combat while the chariot spun quickly to change direction, then leap aboard again to retreat to safety and prepare the next assault. (King 1998:36)

Cavalry/Mounted Riders

During the Iron Age, the mounted rider eventually displaced the use of the chariot (James 1993:78). The exploitation of horses in this new style of combat created, greater possibilities in using the horse in warfare (James 1993:79). Cavalry naturally operated best in open country and during the seasons of late spring to autumn because food for the horse was more readily available (Green 1992:75-6). The only sources of knowledge provided to us about these mounted riders come from iconography and ethnohistoric these accounts universally acknowledge the Celtic mastery of the horse in battle (Newark 1986:20). The Celts were so well known for their horsemanship that they were employed as mercenary cavalrymen for the Greeks, Romans, and even Hannibal during the Second Punic War (Newark 1986: 15; Cunliffe 1997: 104). The Roman historian, Strabo states that the Celts were better horsemen than foot soldiers and the best mercenary cavalrymen the Romans ever employed (Newark 1986:15). Looking at the material culture left behind a growing emphasis on mounted riding and warfare can be seen at the end of the third century B. C. (Allen 2001:61).

Mounted riders are believed to be of high status because of the expensive nature taking care of a horse demands upon an individual (Newark 1986:17). Horses had to be picked and trained especially for their use in battle. A horse was selected for their character and temperament. The horse had to have high spirits but not be individualistic along with being amenable to training and obedient to orders. The training consisted of learning not to react to the smell of blood, noise and crossing both rivers and rough ground without hesitation (Green 1992:75-6). The mounted rider had several pieces of equipment that they used and they were generally elaborately decorated to establish status. Equipment constituted of flexible iron horse bits dating to fifth and third century B.C., armor for horses head (Newark 1986:17), spurs (Green

1992:71), a sword, a shield, and the Celts wore bracae, better known as pants, when riding (Ritchie 1985:14). The length of the sword was believed to have been increased during the end of the third century B.C. because of the rise in mounted warfare (Cunliffe 1997:104). The length of the sword was extended to 80-90 centimeters making it too long for a warrior fighting on foot to fight comfortably (Cunliffe 1997:104; Allen 2001:46). Depictions from the Gunstrupe Cauldron (refer to Figure 9) and a sword scabbard from a Hallstatt grave (refer to Figure 10) illustrate what Celtic mounted warriors looked like.



Figure 9. One of the panels from the Gunstrupe Cauldron depicting mounted riders.
Source: Powell 1980: Figure 132

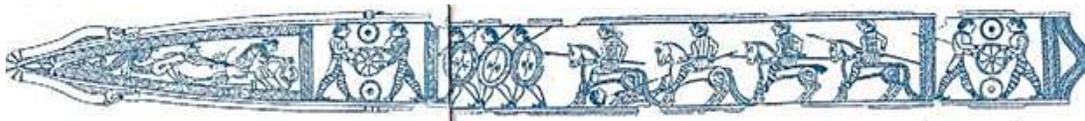


Figure 10. Sword scabbard recovered from a Hallstatt grave depicting mounted horsemen.
Source: Eluere 1993:18-9

Celtic riders fighting from horseback needed a way to stay firmly on their horse since stirrups were not invented at this time their saddle was devised with four tall pommels. Two pommels behind the rump and two pommels in front angled out over each of the thighs making it so the rider sat in rather than on the saddle (James 1993:79) (refer to Figure 11).



Figure 11. Depiction of Celtic saddle with pommels.
Source: After Allen 200:37

The method in which the Celts used mounted riders and to the extent of their use is highly debated amongst scholars. Celts used cavalry units in several ways. They acted as advance or resonances troops, guarded marching columns, challenged and taunted the enemy, ambushed foraging Romans, cut off supplies, and pitched battles by harried and outflanking (Green 1992:76). The technique called *termarcasia* has been referenced by historians. This consists of a nobleman and his two grooms. The grooms stay behind army ranks ready with a fresh horse and if the lord is killed or injured one of the servants would take his place and the other would take the lord back to camp (Green 1992:77). The historian Polybius recounts:

Iberian and Celtic cavalry were not squadron of horsemen fighting as a unit, but merely mounted warriors who, once they arrived at the battle area dismounted and fought on foot (Ritchie 1985:34).

Then there is the account by the Greek historian and cavalry officer of the fourth century B.C., Xenophon states during the war between Sparta and Thebes:

Few though they were, they were scattered here and there. They charged towards the Thebans, threw their javelins, and then dashed away as the enemy moved towards them, often turning around and throwing more javelins. While pursuing these tactics, they sometimes dismounted for a rest. But if anyone charged upon them while they were resting, they would easily leap onto their horses and retreat. If enemy warriors pursued them far from the Theban army, these horsemen would then turn around and wrack them with their javelins. Thus they manipulated the entire Theban army, compelling it to advance or fall back at their will (Newark 1986:15).

METHODOLOGY

In order to address the changing importance of horses within Celtic society this paper will specifically explore three questions: 1) How effective were horses with regard to warfare?; 2) What was the influence of horses on the Celtic religion?; 3) Did horses help to maintain the social structure in the Celtic Society? These three questions are posed because they examine the three core aspects of Celtic life and thus can illustrate the overall changing importance of horses within Celtic society.

Addressing the three research questions just posed was accomplished through the use of published data from previous studies of Celtic culture. As the present study is examining the overall role change on the wider Celtic society, it was necessary to gather data from a variety of sites distributed across the entire geographically area within which Celtic remains have been identified. This will help us to further understand the changing role of horses within the Celtic society, during these periods.

To determine how effective horses were during times of warfare several things must be taken into account. During times of war the Celts utilized horses in two main ways either pulling

a wheeled vehicle or mounted riding. The key word in this question is the word “effectiveness” and how to go about answering the question. In answering the posed question two concepts were analyzed: burials and ethnohistory. When examining burials the focus was placed on the type of burial and on the material culture present in the grave. Particularly the difference between burials that had wheeled vehicle fittings present and burials that had mounted horse gear present at the site. Once burials were distinguished between these criteria, a comparison could be done to determine an overall trend between burials in the Hallstatt Period versus the La Tène Period to establish preference in horse usage. The other element used to help figure out the effectiveness of horses in warfare was ethnohistoric accounts from the Romans and the Greeks; for instance, people like Julius Caesar, Diodorus Siculus, Tactics, and Xenophon. Their firsthand accounts will help to put into context how horses were used. With any written document the writer’s purpose has to be taken into account to help establish what kinds of possible bias might be unconsciously written within the document being read.

To establish the extent of the role horses had on religion three core elements were investigated; deities, iconography, and animal sacrifices. When looking at the deities the first objective was to determine which deities had associations with horses. Association in the context of this paper refers to the usage of the horse in regards to representation of a deity, protection by a deity, or depicted synonymously with a deity. When trying to establish the trend of horse worship a tally from both periods was kept and compared to each other to ascertain if an increase or decrease could be determined. The analysis of iconography is connected with deities since the sites that were analyzed came from shrines that had associations with horses. The main focus with analyzing animal sacrifices was on horse sacrifices. Data was gathered from burials and from religious areas from both time periods and also other animal sacrifices were noted. The

presence of horse sacrifices was compared between the two time periods. Horse sacrifices were also compared to the other animal sacrifices from their prospective time periods to establish some kind of trend with both animal and horse sacrifices from the Hallstatt to the La Tène Period.

To ascertain how the changing importance of horses helped to maintain the social structure in the Celtic society, burials were again split but this time between the presence or absences in horse gear. Once burials were divided between this criteria grave goods were categorized. Then, the categories from burials with the presence of horse gear were compared to burials of the same time period that did not have horse gear present within the grave. This comparison will help to show if horses did affect the social structure of the Celtic society.

ANALYSIS

In trying to answer the three research questions posed through the use of published data from previous studies of Celtic culture it came apparent that finding a systematic and detailed account of the sites that were used in this paper was not achieved by previous studies. No blame can be put on previous studies for this issue; many of the sites cited by the previous studies and this study come from a time when systematic and detailed accounts of what was being discovered were not thought about. This issue of gaps in data made it improbable to quantify the data by means of exact numbers with regard to material culture found at the different sites or sometimes even the material the artifact was made from was unavailable; these were just some of issues that arose when creating the data base for this paper (refer to Appendices C-E). To circumvent this issue of discrepancies in the recording of data since using exact numbers from sites was not

possible in order to keep the data uniform an absent/present system was used instead. With the wide range of material goods left behind in the burials a grouping system was needed to help organize and illustrate trends when it came time to analyze the data. This led to the creation of nine categories: tools, weapons, domestics, horse gear, ornaments, animal remains, iconography, human remains, and other (refer to Appendix A for detailed breakdown of the categories).

With the creation of the data bases, artifacts or materials that were present were assigned the number one. This was done to make it easier to tally up the totals of object or material when combining data from multiple sites in order to answer one of the posed research questions. The totals compiled from the various sites depending on the objects' functions were then compared period to period to establish trends of how the importance of horse's role within Celtic society changed. Most of the graphs in this section were put into percentages to help make the data as clear as possible to establish the trends when comparing the two time periods to each other.

With regard to the figures dealing with the burials to establish social status through the absence/presence of horse gear in burials the total numbers found at sites were used instead of percentages (refer to Figures 15 and 16). The reason for this was because of the small data set used for the burials that had an absence of horse gear. The small data set when converted to percentages skewed the data making the data appear that the horse did not help to establish status within the Celtic society. The figures used in this section have their counterpart in Appendix B so that the reader can see how the percentages or the total number of absent/present changes because of the size of the data sample used. Along with this Appendix C through E provide all the raw data used in this study to help the reader understand the interruption provided in this study.

Horses were used in many ways within Celtic society; this can be established by ethnohistoric accounts and by the material culture left behind. Horses were used in warfare but to what extent has many scholars in debate. In ethnohistoric accounts the effectiveness of horses in chariot warfare has mixed results. When it comes to horseback usage, the ethnohistoric accounts seem to be more unanimous in the effectiveness of Celts on horseback. One intention of this paper is to see if the material cultural could help to reveal how effective horses were in warfare when used to pull wheeled vehicles verses mounted riding; this was examined by trying to establish if a preference within the material culture left behind could be seen and if this preference changed from the Hallstatt to the La Tène Period. Data was compiled from burials that contained two elements: horse gear and weapons. This criterion was established to help get a clear picture of horses in warfare since some of the burials that had horse gear present did not have grave goods that would indicate that the individual buried was of warrior status were not used. Once the sites were compiled that met these requirements they were further divided between wheeled vehicle horse gear- in other words had chariot or wagon fittings present- and horse gear that was for the sole purpose of mounted use. Figure 12 below shows how the trend in wheeled vehicles versus mounted riding changes from the Hallstatt to the La Tène Period. A change can be seen from the Hallstatt to the La Tène Period in the number of wheeled vehicles decreased as the number of mounted horse gear increased over the two time periods.

The Celts had an extensive belief system between their vast pantheon of deities and their belief in animism. In helping to establish how the role of horses changed within Celtic society, looking at the horse with regard to religion was needed. When collecting data to answer this question it was easier to find documentation on religious sites from the La Tène Period then it was from the Hallstatt Period. It was especially easier to find shrines towards the end of the La

Tène Period. The data that was collected paid particular attention to sites that venerated deities that had some kind of connotation to horses. A tally was kept of the presences of these deities

Shows the Overall Trend of Moving From Wheeled Vehicles Usage to Mounted Riding

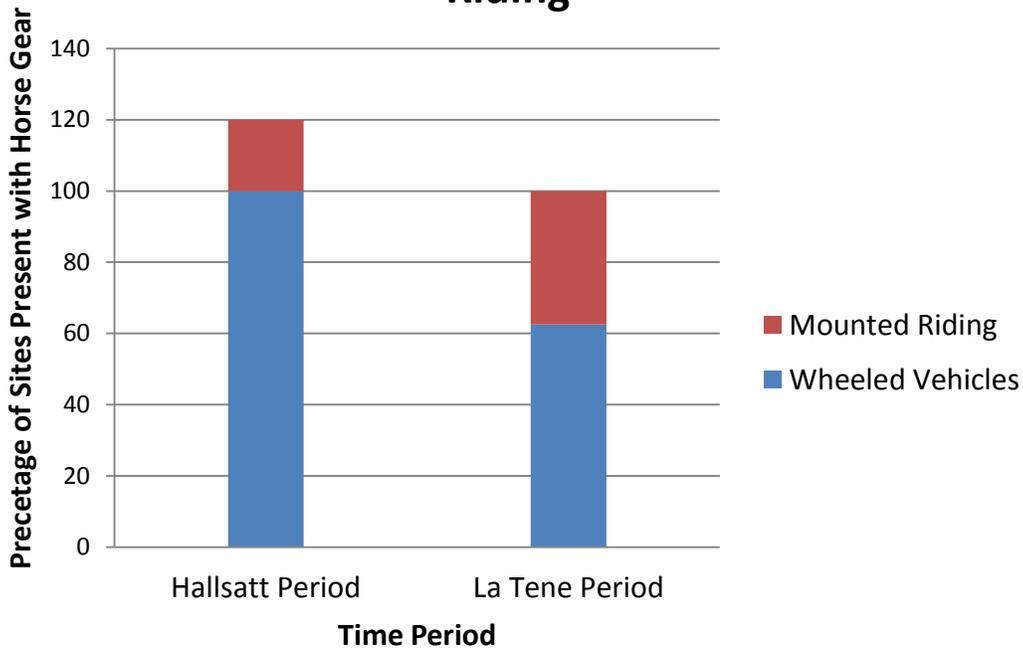


Figure 12. Overall Trend of Moving from Wheeled Vehicles usage to Mounted Riding.

and the amount of times that they occurred in the two time periods. The Figure 13 was generated to show the overall trend of occurrence. Along with deity worship, animal sacrifices were looked at since sacrifices were a very important part of the Celtic religion. The data for the sacrifices was collected both from religious areas and from burials from the perspective time periods. Once the data was collected from both time periods it was generated into Figure 14 and the periods were compared to each other to show the overall trend of animal sacrifices with a specific emphasis on the difference in horse sacrifices between the Hallstatt and La Tène Period. Both

Figures 13 and 14 show a general increase in religious activity during the La Tène Period; also a greater emphasis is placed on horses during the La Tène Period.

It is a general assumption of scholars that horses were a symbol of status; this assumption is not just within the Celtic society. This paper not only tests this assumption but also tried to establish if horses had some influence on maintenance of the social structure within the Celtic society. This was done by separating burials within both periods into two categories: burials with the presence of horse gear or those with an absence of horse gear. Once that was done the grave goods were divided into the categories previously discussed. After this two separate Figures 15 and 16 were created for both periods to establish if horses did have an influence on social structure.

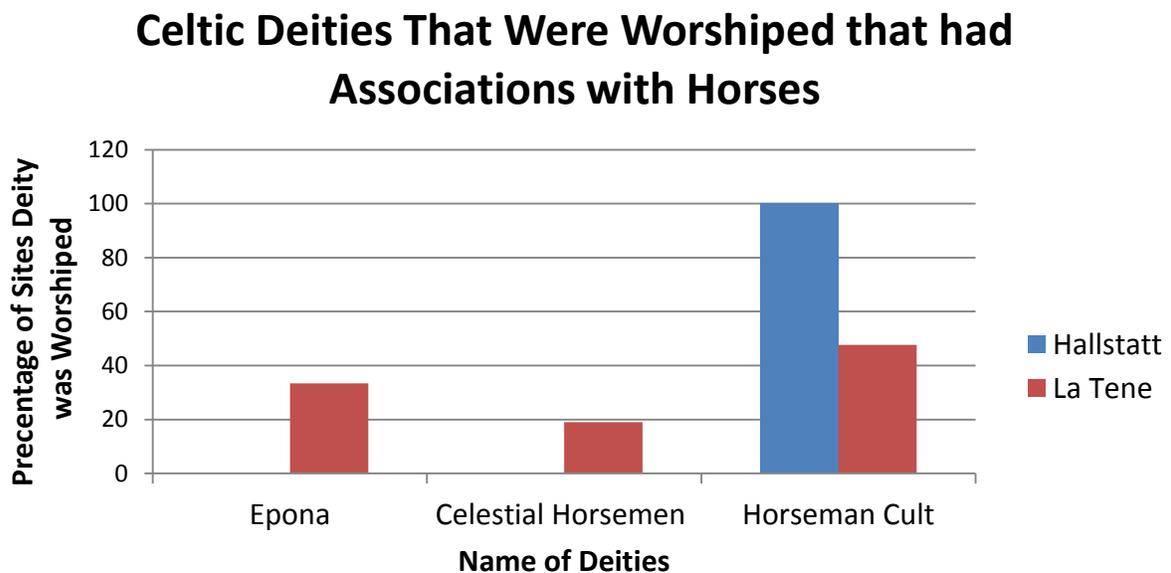


Figure 13. Shows the trend of increase in deity worship with association to horses.

Animal Sacrifices

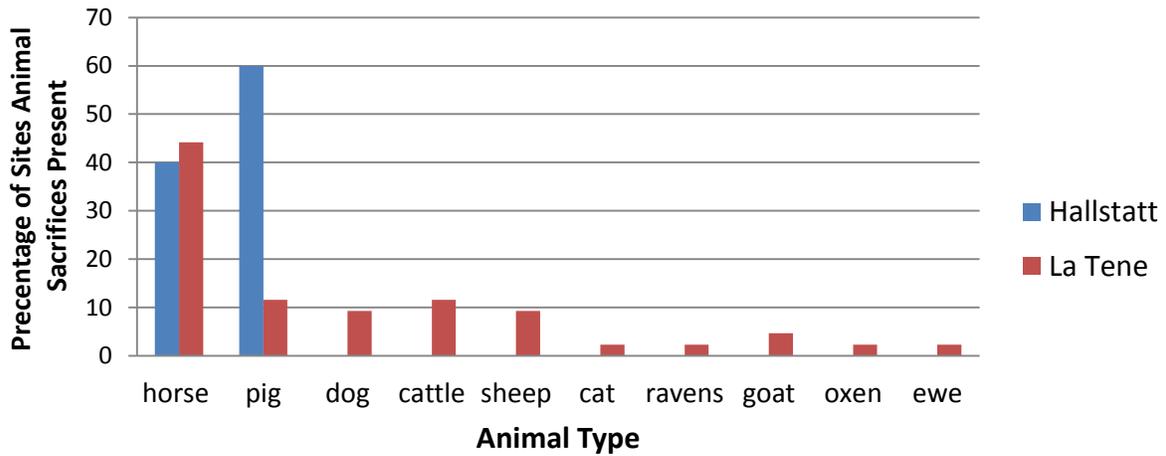


Figure 14. Shows an increase in animal sacrifices from the Hallstatt to the La Tène Period.

Difference in Material Culture in Hallstatt Burials with the Presence or Absence of Horse Gear

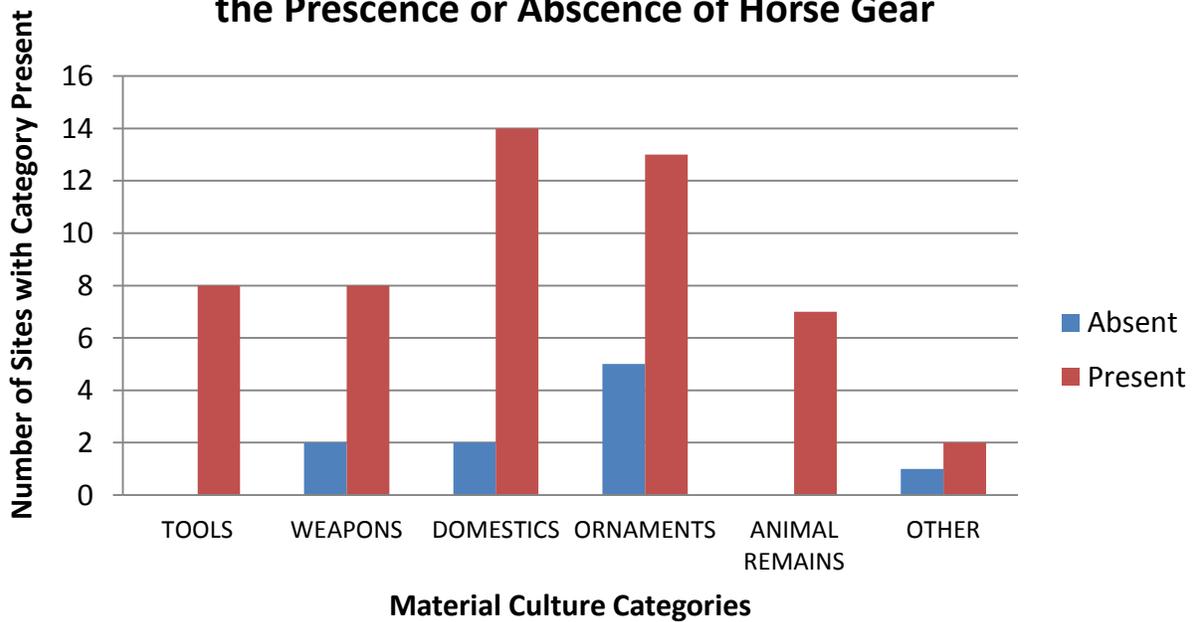


Figure 15. Depicts the difference in grave goods during the Hallstatt Period.

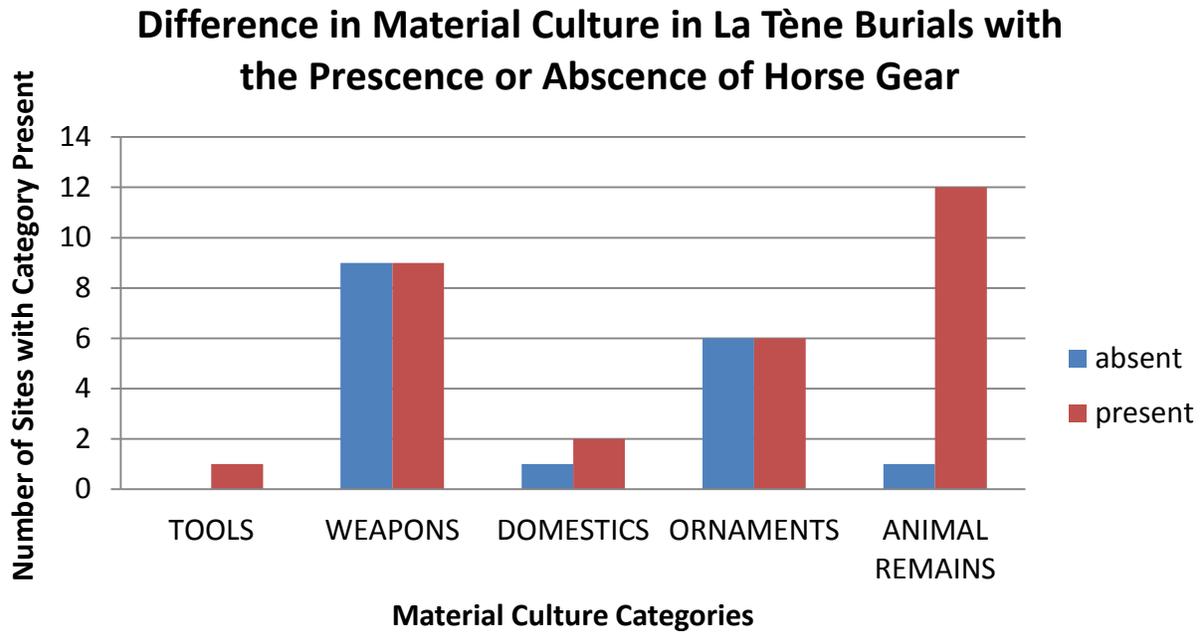


Figure 16. Depicts the difference in grave goods during the La Tène Period.

CONCLUSIONS

After the collection and the analysis of the data, several conclusions can be drawn about the importance of horses within the Celtic Society and how their role changed from the Hallstatt to the La Tène Period. This study attempted to establish the effectiveness of the two main modes of horse warfare within Celtic society. With regard to Celtic mounted warfare it is fairly reasonably to say that it was a highly effective form of warfare. Ethnohistoric accounts confirm the effectiveness of Celtic mounted warfare because of how highly sought after mounted Celtic mercenaries were by other Old World civilizations. Also from an examination of Figure 12 it can be seen that the material culture within both periods shows a universal shift from wheeled vehicles to the use of mounted horses. We also know from ethnohistoric accounts that on the continent during the La Tène Period, the chariot became obsolete after the battle of Telamonin in

223 B.C. (Green 1992: 84; James 1993:78). When discussing the effectiveness of the use of chariots in warfare cannot be clearly determined. Ethnohistoric accounts tend to be mixed on usage and effectiveness of chariots in battle. Even though chariots were documented by Caesar to be highly maneuverable it does not seem that two ponies pulling what is essentially a box behind them along with a load of two full-sized adults would be as effective as a lone person sitting astride a horse. Also, technology tends to stick around, especially when that technology deals with aspects of war; if the chariot was really that effective it would not have been replaced by the practice of mounted horse warfare. The number of cart burials found cannot be used as a reference of chariot effectiveness in battle because the “chariots” found in burials could quite possibly be carts (Cunliffe 1995:31). Chariots cannot be completely disregarded as not being useful. They did help to change the way warfare was fought with regard to transportation of warriors by getting warriors from point A to point B at rapid pace; they were at the very least a glorified “battle taxi” (James 1993:78; Anthony 2007:397).

The Celtic society is rooted within the frame work of its belief system. Not only were their religious leaders the Druids in charge of religious aspects, they also were the ones to preside over civil disputes and to hand out punishments (Haywood 2004:35). Along with this they believed in animism, the belief that everything has a spirit (Green 1986:32). With those two key thoughts in mind it comes to no surprise that there was an increase in religious activity from the Hallstatt Period to the La Tène Period in deities worshiped with associations to horses and the diversity and quantity of animal sacrifices increased over time (refer to Figures 13 and 14). Along with this increase in religious activity the role of horses within Celtic religion also increased in regard to depictions of horse connected to deities and the number of horse sacrifices. The rise in religious activity can probably be connected to the increase and use of mounted riding

and also to outside influences. Since two of the deities that arose so prominently during the La Tène Period have ties with mounted riding Epona, the protector of mounted riders and their horses, and the Horsemen Cult that had strong ties to equestrian warriors and the act of head hunting (Green 1992:205 and Green1986:173). Also during the transitional period from Hallstatt to La Tène Period and during the La Tène Period an increase in trade with the Mediterranean region can be seen in the material culture found within burials (Moscati 1999:185; Hatt 1970:89; Davidson 1993:2; Newark 1986:15). This could also very well be another reason to explain the change in the Celts' viewpoint about horses within their religion.

Within the archaeological world it is generally assumed that in order to own animals, especially animals that require a regulated and demanding dietary plan to survive, one must be a person of status. It appears the Celtic society was no different. When looking at Figures 15 and 16 it can be seen that there is a difference in grave goods with or without the presence of horse gear. This division in status between horse owners and non-horse owners seems to be more prominent in the Hallstatt Period than in the La Tène Period. This could be caused by a couple of factors. The La Tène Period is known to be more militaristic in nature than the Hallstatt Period and if the usage of horses, especially mounted horse warfare increased, as ethnohistoric accounts lead one to believe it would stand to reason that more people would own horses. So the gap between aristocratic warrior and the foot soldier would be smaller in the La Tène Period. Also, the dispersion of economic opportunities and wealth seems to be more spread out during the La Tène Period; unlike the Hallstatt Period that seems to have more localized areas of wealth (Hatt 1970:89; King 1998:26; Eluere 1993:44). This means more people could afford to have more lavish grave goods regardless of horse ownership. Regardless of all of this, horses still established some difference in social status between individuals in the La Tène Period.

There are also some general conclusions that can be made about the changing role of the horse within the Celtic society. It seems that horses go from a small impact within the framework of the Hallstatt Period to a more active role within the La Tène Period. During the Hallstatt Period horses were mainly utilized for status purposes but during the La Tène Period horses were not only used to establish status but also used more readily throughout their whole social structure- in status, religion, and warfare.

APPENDIX A

Table 3. Material Culture Category Breakdown.

<p><u>Tools-</u> Tweezers Knives Sickles Tongs Needle Spades</p>	<p><u>Weapons-</u> Sword Spear Shield Sword belts Chain mail Dagger Helmet</p>	<p><u>Domestics-</u> Pottery Mirror Bucket Canister/box Cauldron Drinking horn Toilet kit amphora Birch hat Textiles leather Button Shoes</p>
<p><u>Horse Gear-</u> Harness fittings Chariot fitting Wagon fittings</p>	<p><u>Ornaments-</u> Head band Fibula/brooch Bracelets Necklaces Armllets Beads Finger rings Pendants</p>	<p><u>Iconography-</u> Frieze Carvings Sculptures</p>
<p><u>Animal Remains-</u> Horse Pig Goat Sheep Cattle Dog Etc.</p>	<p><u>Human Remains-</u></p>	<p><u>Other-</u> Anything that did not fit into the pervious categories for example identifiably material mentioned by previous studies</p>

APPENDIX B

GRAPHS SHOWING THE PERCENTAGE OF MATERIAL CULTURE FOUND AT SITES

**Shows the Overall Trend of Moving from Wheeled Vehicles
Useage to Mounted Riding**

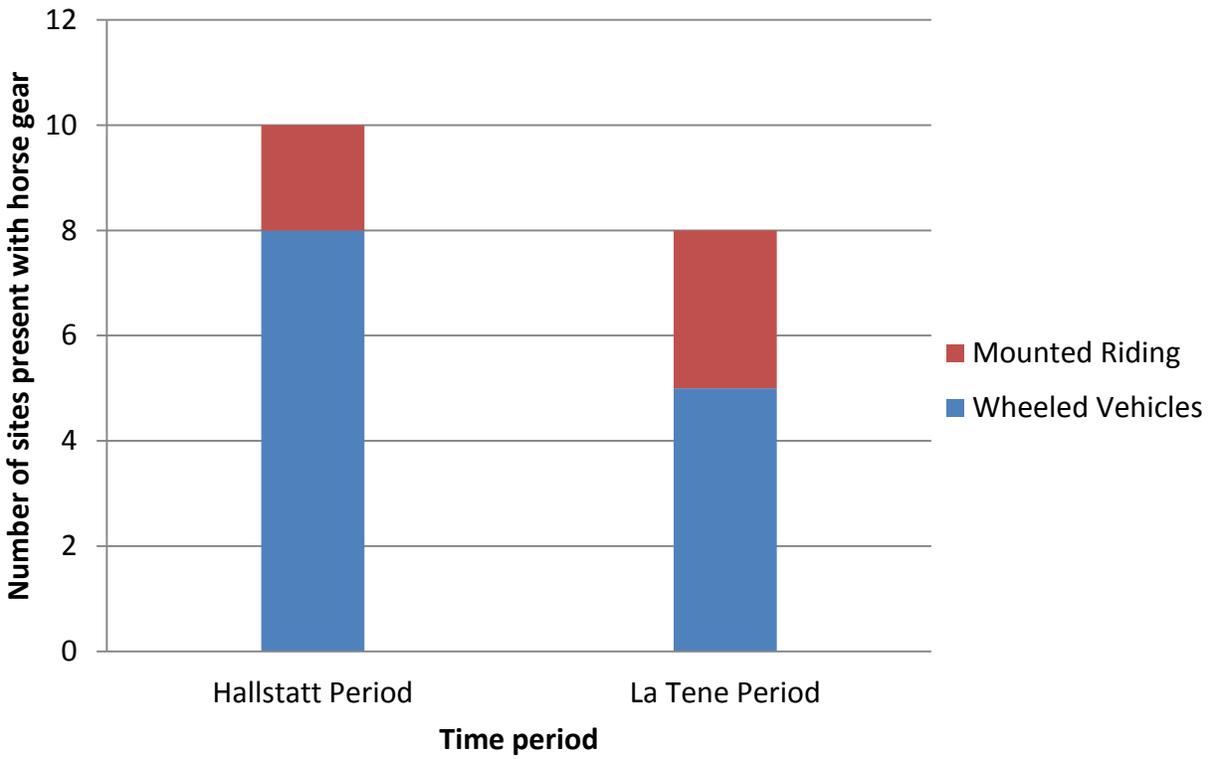


Figure 17. Shows the number of sites that had either wheeled vehicles or mounted horse gear present at burials.

Celtic Deities That Were Worshipped that had Associations with Horses

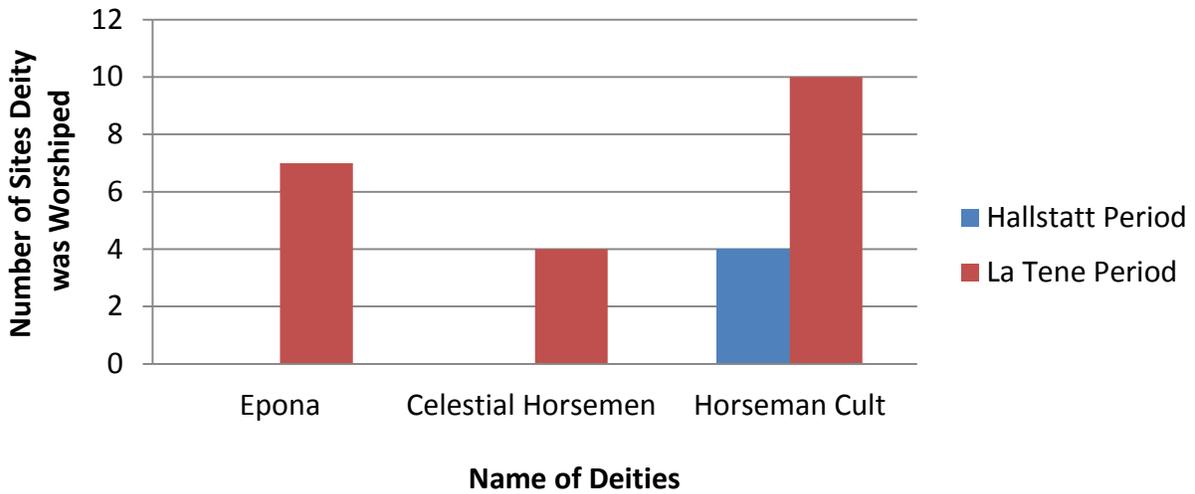


Figure 18. Shows the number of sites that Deities with associations to horses were found.

Animal Sacrifices

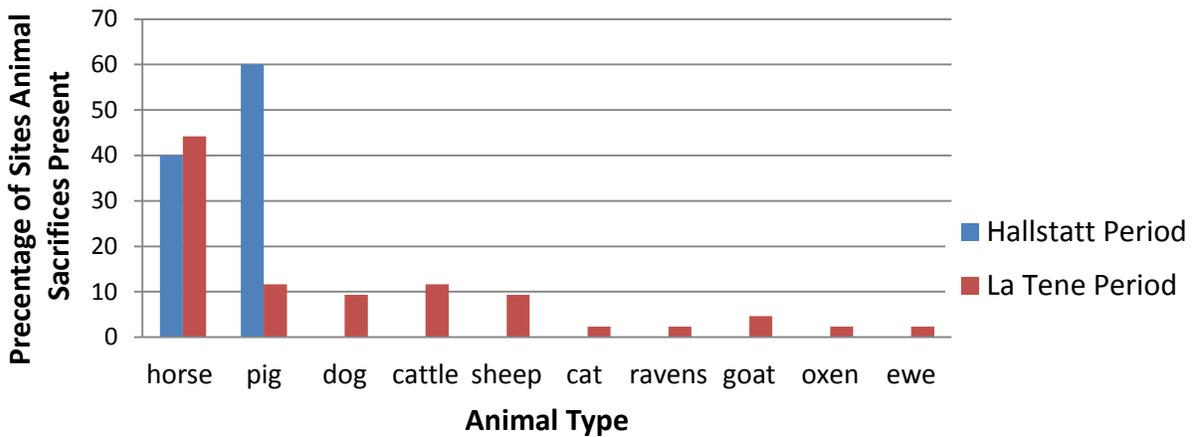


Figure 19. Shows the number of sites that had animal sacrifices in religious areas or burials.

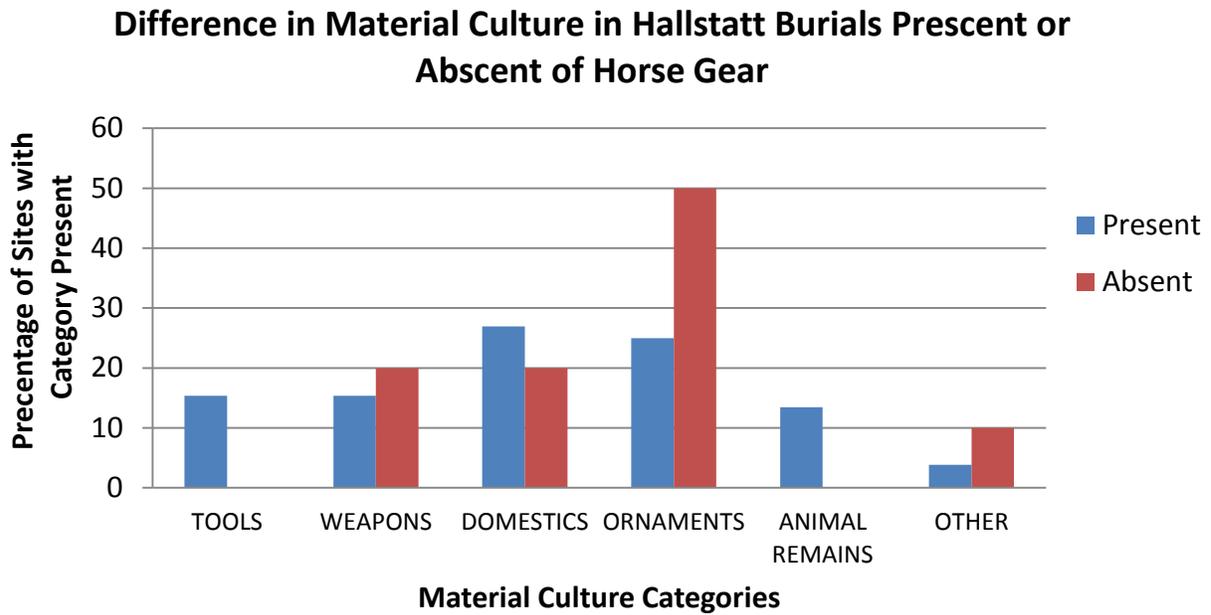


Figure 20. Shows the percentage of burial sites that have the presents or absents of horse gear.

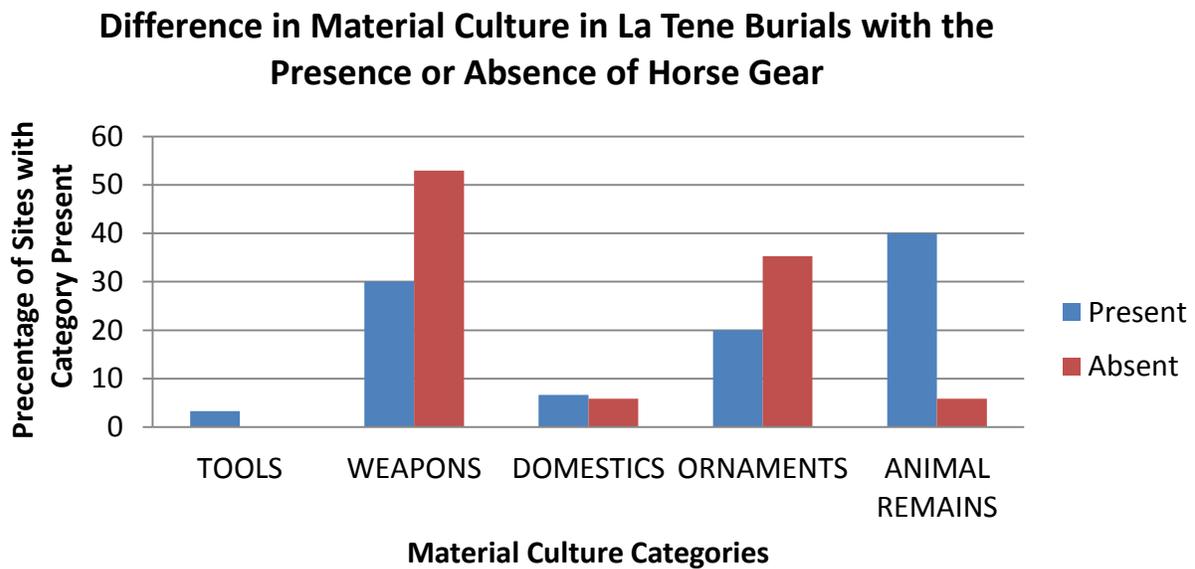


Figure 21. Shows the percentage of burial sites that have the presents or absents of horse gear.

APPENDIX C

RAW DATA FOR WHEELED VEHICLE VERSUS MOUNTED RIDERS

Table 4. Raw data of Hallstatt Period Wheeled Vehicles.

SITE NAME	WHEELED VEHICLES	MOUNTED RIDING
Ohnenhiem	1	
Dysina, tumulus 2	1	
Hardenin grave 24	1	1
Lhotka	1	
Eberdingen-Hochdorf an der enz	1	
Stuttgart-Bad Cannstatt, grave 1	1	
Strettweg	1	
Hardenin grave 28	1	1
TOTAL	8	2

Table 5. Raw Data of La Tène Period Wheeled Vehicles Burials.

SITE NAME	WHEELED VEHICLES	MOUNTED RIDING
Wetwang Slack burial 1	1	
Wetwang Slack Burial 2	1	
Kirkburn Grave K5	1	
Garton Station	1	
La Gorge Meillet	1	
Goeblingen-Nospelt		1
Fordington		1
Nehan Croft		1
TOTAL	5	3

APPENDIX D

RAW DATA FOR RELIGIOUS DIETIES AND ANIMAL SACRIFICES

Table 6. Raw Data of Hallstatt Period deities worshiped at shrines.

SITE NAME	EPONA	CELESTRIAL HORSEMEN	HORSEMEN CULT
Site of Sopron			1
Mouries			1
Speilem			1
Kleinklein			1
TOTAL	0	0	4

Table 7. Raw Data of La Tène Period deities worshiped at shrines.

SITE NAME	EPONA	CELESTRIAL HORSEMEN	HORSEMEN CULT
Kastel near Bonn	1		
Beilhingen near Stuttgart	1		
entrains (Nievre)	1		
Mellecy	1		
Wiltshire	1		
Meussig=Vicenz	1		
Metz cemetery of La-Horgne-Au-sablon	1		
Butterstadt		1	
Obernburg		1	
Meaux		1	
Luxeuil		1	
Roquepertuse			1
Ribemont-Sur-Ancre			1
Entremont			1
Sainte-Anastasie			1
sanctuary at Mouries			1
Saint-Michel de Valbonne (Var)			1
Mavilly			1
Shrines at Bringstock			1
Martlesham			1
Sainte-Sabine			1
TOTAL	7	4	10

Table 8. Raw Data of Hallstatt Period Animal Sacrifices.

SITE NAME	Horse	Pig	Dog	Cattle	Sheep	Cat	Ravens	Goat	Oxen	Ewe
Hradenin grave 18	1	1								
Hradenin grave 5		1								
Hardenin grave 24		1								
Hardenin grave 28		1								
Lhotka	1									
Villingen- Schwenningen, 'Magdalenenberg' gave 1		1								
Hugelsheim 'Heiligenbuck'		1								
Byci Skala	1									
South Cadbury (Som.)	1									
TOTAL	4	6	0	0	0	0	0	0	0	0

Table 9. Raw Data of La Tène Period animal sacrifices.

SITE NAME	Horse	Pig	Dog	Cattle	Sheep	Cat	Ravens	Goat	Oxen	Ewe
Danebury Hillfort	1	1	1	1	1	1	1			
Bekesbourne	1									
Roquepertuse	1									
Lydney	1									
Danebury Hillfort	1									
Epiais-Rhus	1									
Ashville	1									
Mirebeau (Cote D'or)	1									
Ribemont-Sur-Ancre	1									
Hillfort of South Cadbury	1			1						
Goumay-Sur Aronde (oise)	1	1		1	1					
Lydney	1									
Liptozska Mara oppidum/fortified town	1		1							
Sainte-Sabine	1									
Mildenhall	1									
Solsson grave 1	1	1	1	1	1			1		1
Solsson grave 2	1	1	1		1			1	1	
Kirkcuburn grave K5	1	1								
Fordington	1									
Ferrybridge				1						
TOTAL	19	5	4	5	4	1	1	2	1	1

APPENDIX E

RAW DATA FOR MAINTINING SOCIAL STURCTURE

Table 10. Raw Data of Hallstatt Period Burials with the presences of horse gear.

SITE NAME	TOOLS	WEAPONS	DOMESTICS	ORNIMANTS	ANIMAL REMAINS	OTHER
Ohnenhiem		1	1			
Blotzheim, 'Lisbuhl'			1	1		
Chouilly, Les Jogasses grave 16						
Ins, tumulus VI of 1848 lower grave	1			1		
Dysina, tumulus 2		1	1			
Hradenin grave 5	1		1	1	1	
Hradenin grave 18	1		1	1	1	
Hardenin grave 24	1	1	1	1	1	
Hardenin grave 28	1		1	1	1	
Lhotka		1	1	1	1	
Eberdingen-Hochdorf an der enz	1	1	1	1		
Ludwigsburg "Romerhugel", chamber grave 1		1	1	1		
Stuttgart-Bad Cannstatt, grave 1		1	1	1		
Villingen-Schwenningen, 'Magdalenenberg' gave 1	1		1	1	1	1
Hugelsheim 'Heiligenbuck'	1		1	1	1	
Strettweg		1	1	1		1
TOTAL	8	8	14	13	7	2

Table 11. Raw Data of Hallstatt Period burials absents of horse gear.

SITE NAME	TOOLS	WEAPONS	DOMESTICS	ORNIMANTS	ANIMAL REMAINS	OTHER
Sainte-Colomne, 'tumulus de la Garenne'			1	1		1
Vix/Mont Lassois			1	1		
Unterlunkofen, tumulus 63		1		1		
Adiswil				1		
Saint Lumier-La-Populeuse		1		1		
TOTAL	0	2	2	5	0	1

Table 12. Raw Data of La Tène Period burials absence of horse gear.

SITE NAME	TOOLS	WEAPONS	DOMESTICS	ORNIMANTS	ANIMAL REMAINS	OTHER
Acklam		1				
Deal in Kent		1		1		
Whitcombe		1		1		
Owslebury		1				
Kietz		1	1	1		
Velka mana grave 28		1				
Goeblingen-Nospelt		1				
Connatre		1		1		
Hochscheid				1		
Grimthorpe		1				
Mildenhall				1	1	
TOTAL	0	9	1	6	1	0

Table 13. Raw Data of La Tène Period burials with presence of horse gear.

SITE NAME	TOOLS	WEAPONS	DOMESTICS	ORNIMANTS	ANIMAL REMAINS	OTHER
King's Barrow					1	
Solssons grave 1					1	
Solssons grave 2					1	
Deal in Kent		1			1	
Wetwang Slack burial 1		1	1	1	1	
Wetwang Slack Burial 2		1			1	
Wetwang Slack Burial 3				1	1	
Wetwang Slack Burial 2001		1		1	1	
Garton Station		1			1	
Mezek						
Cawthron						
Ferrybridge				1	1	
Kirkburn Grave K5		1				
La Gorge Meillet	1	1	1	1	1	
Nehan Croft		1		1		
Fordington		1			1	
TOTAL	1	9	2	6	12	0

APPENDIX F

LOCATION OF WHERE RAW DATA CAME FROM

Table 14. Hallstatt Period Sites used in paper.

SITE NAME	CITATION
Adiswil	Pare 1992:232
Blotzheim, 'Lisbuhl'	Pare 1992:222-3
Byci Skala	Green 1986:113; Pare 1992:319-21
Chouilly, Les Jogasses grave 16	Pare 1992:223
Dysina, tumulus 2	Pare 1992: 321
Eberdingen-Hochdorf an der enz	Pare 1992: 247-9
Hradenin grave 5	Pare 1992:322
Hradenin grave 18	Pare 1992: 322-3
Hardenin grave 24	Pare 1992: 323-4
Hardenin grave 28	Pare 1992: 324-6
Hugelsheim 'Heiligenbuck'	Pare 1992: 254
Ins, tumulus VI of 1848 lower grave	Pare 1992: 235
Kleinklein	Green 1986:173; Green 1992: 69
Lhotka	Pare 1992: 329
Ludwigsburg "Romerhugel", chamber grave 1	Pare 1992: 261-3
Mouries	Green 1992: 150
Ohnenhiem	Pare 1992:226-8
Sainte-Colombe, 'tumulus de la Garenne'	Pare 1992: 229-30
Saint Lumier-La-Populeuse	Charpy 1995: 14-17
Site of Sopron	Green 1992:56
Speilem	Green 1992: 69
South Cadbury (Som)	Green 1992: 109, 114
Strettweg	Pare 1992:
Stuttgart-Bad Cannstatt, grave 1	Pare 1992: 268-9
Unterlunkofen, tumulus 63	Pare 1992: 236
Villingen-Schwenningen, 'Magdalenberg' gave 1	Pare 1992: 273-4
Vix/Mont Lassois	Pare 1992: 231-2

Table 15. La Tène Period Sites used in paper.

SITE NAME	CITATION
Acklam	Ritchie 1985: 24
Ashville	Green 1992: 36-7
Beilhingen near Stuttgart	Green 1997: 13
Bekesbourne	Green 1986:173; King 1998: 48; Green 1997:5
Butterstadt	Green 1997:17
Cawthorn	Longworth 1965: 54
Connatre	Ritchie 1985: 22
Danebury Hillfort	Green 1986:167-8; James 1993:5; Green 1992: 20-1, 70
Deal in Kent	James 1993:47
entrains (Nievre)	Green 1997:13
Entremont	Green 1997:8
Epiais-Rhus	Green 1992:115; Green 1997: 4
Ferrybridge	Iron Age Chairot Burials section 3
Fordington	Cunliffe 1974: 291-2
Garton Station	Laing 1995: 33; Iron Age Chariot Burials section 2
Grimthorpe	Longworth 1965: 54
Goeblingen-Nospelt	Green 1992:71
Goumay-Sur Aronde (oise)	Green 1997: 3; Green 1992: 72; Eluere 1993: 106
Hillfort of South Cadbury	Green 1992: 109
Hochscheid	Moscatti 1999: 187
Kastel near Bonn	Green 1997:13
Kietz	Ritchie 1985: 22
King's Barrow	Green 1992:105; Green 1986: 125; Cunliffe 1974:289
Kirkburn Grave K5	James 1993: 100, 112; Iron Age Chairot Burials section 2
La Gorge Meillet	Ritchie 1985: 19-21; Musée des Antiquités Nationales
Liptozska Mara oppidum/fortified town	Green 1992: 114
Luxeuil	Green 1997:17
Lydney	Green 1992: 57
Martlesham	Green 1997: 16
Mavilly	Green 1997:100, 112
Mildenhall	Cunliffe 1974: 290
Mirebeau (Cote D'or)	Green 1992: 109
Meaux	Green 1997: 17
Mellecy	Green 1997:13
Metz cemetery of La-Horgne-Au-sablon	Green 1992:206
Meussig=Vicenz	Green 1997:14
Mezek	Encyclopedia of Art
Nenham Croft	Cunliffe 1974: 291

Table 15. La Tène Period Sites used (continued).

SITE NAME	CITATION
Obernburg	Green 1997:17
Owslebury	Ritchie 1985: 24
Ribemont-Sur-Ancre	Green 1997:3-4
Roquepertuse	Green 1992:73; Powell 1980: 130, 162; Finlay 1973:66
Sainte-Anastasie	Green 1997: 8
Saint-Michel de Valbonne (Var)	Green 1997: 8
Sainte-Sabine	Green 1997: 16
sanctuary at Mouries	Green 1997: 8
Shrines at Bringstock	Green 1997: 16
Solssons grave 1	Green 1992: 83
Solssons grave 2	Green 1992: 83
Velka mana grave 28	Ritchie 1985:22
Wetwang Slack burial 1	James 1993: 101; Iron Age Chariot Burials section 2
Wetwang Slack Burial 2	James 1993: 101; Iron Age Chariot Burials section 2
Wetwang Slack Burial 3	James 1993: 101; Iron Age Chariot Burials section 2
Wetwang Slack Burial 2001	James 1993: 101; Iron Age Chariot Burials section 3
Whitcombe	Ritchie 1985: 24
Wiltshire	Green 1997:13

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