Abstract

Jupiter in the *Aeneid* stated that Rome would have “*imperium sine fine,*” or an empire without borders. Britain had been subjected to invasions by Augustus Caesar (55 B.C.) and Julius Agricola (A.D. 77 - A.D. 84) in the past. In 128 A.D. Hadrian halted the previous emperors’ expansions, both in the east and also in Britain with a wall. The creation of Hadrian’s Wall was a pivotal point in the history of the Roman Empire. Hadrian’s Wall created a unique flow of Roman culture into northern Britain by establishing the Roman military as the only true administration in the region. The cultural influence of the military settlements forced a new way of life onto indigenous people by undermining traditional ideas and forcing them to conform to the Roman way of life. This paper draws upon archeology, ancient sources, and previous research to argue that Hadrian’s Wall acted as a catalyst for Romanization to bring prosperity to the land through instating what Rome believed to be a “superior” culture.
Introduction

There have already been numerous modern works written over Hadrian’s Wall. Authors such as David Breeze explain how the Wall was created and the roles of different legions, while authors such as Leslie Hepple go into detail about the history and inscriptional elements of the Wall. I expand on these already established points, but my main focus is on the effects the Wall had on the local population and the land.

The history of Hadrian’s Wall is a key tool when aiming to fully understand this structure. Archeology did not become professionalized until the sixteenth century, so information from before then is limited (Osborn 13). John Leland in 1543 was the first known author to write physical descriptions of Hadrian's Wall in his *Itineraries*. William Camden wrote *Britannia*, in 1586 which included a more comprehensive description of the Wall. In 1695, Bishop Gibson expanded on Britannia, but it was in 1732 when Reverend John Horsley wrote the most complete summary of the Wall, *Britannia Romana*. Even though these authors provided more information about Hadrian's Wall than previous texts had, it was not their main topic of focus.

Archeological explorations of the site did not begin until the eighteenth century, and early discoveries were mainly by accident. A road construction project in the 1750s either covered up or disfigured the Wall (Hingley 131). Many sections were dug up and the foundations could finally be viewed after being covered for hundreds of years. Robert Shafto was able to sketch both the Benwell milecastle and bath house from viewing the construction site from his house (Osborn 14). The project also resulted in other discoveries including multiple Roman altars and a stone inscription describing the inception of Hadrian’s Wall (Hingley 132).
In 1796, the site of the Chesters milecastle was purchased by Nathaniel Clayton. He was interested in Roman antiquity as ascertained by the large volumes of Roman history passed down to his son; however, Clayton did not take interest in the Wall and therefore he deemed the remains a nuisance. Clayton’s lack of interest resulted in the Wall’s remains being either destroyed or covered up. Thankfully, his son, John Clayton, had a different view on the Wall and spent fifty years of his life excavating the Chesters milecastle. John also participated in the excavation of Housesteads and Cawfields milecastles. At the time of his death, he owned five of the seventeen milecastles, each well preserved.

Full scale excavations of Hadrian’s wall did not begin until the nineteenth century. By 1930, most of the forts had been discovered. During recent years there has been a halt in excavating due to stringent rules and funding which has left progress to be made by only a few private enterprises such as that at Vindolanda, where a multitude of tablets and inscriptions have been found (Osborn 17). From 1973–1994, 250 wooden tablets were discovered ranging from personal letters to official documents (Osborn 17). Normally, the wooden tablets would have already decomposed, but the damp conditions allowed the relics to be preserved (Osborn 17).

There is a vast array of information available from previous research, but it is important to acknowledge both the strengths and weaknesses of this information. To reiterate, archeologists such as John Clayton excavated the ruins and ascertained primary evidence about the materials that constitute the Wall. Excavations around the wall are extremely pertinent to understand what the Wall was made from and how the structure was outlined; however, it is difficult to know exact dates based off archeology alone. What is seen as significant to the archeologist varies depending on their area of expertise (Hill 5). Most of the digging for the site used the Wall as an
outline to find other notable objects of interest such as pottery or other relics (Aurenches 18). Thus, many explanations regarding the Wall are vague and do little to differentiate differences between the sections (Hill 5). Nonetheless, these excavations provide coinage, letters, and inscriptions- all are invaluable for providing supplementary context to the era.

Using ancient sources such as the *Historia Augusta* to understand the background of the emperor who created the Wall contextualizes a rough estimate of what the time period was like. The actual author/authors of the *Historia Augusta* are still a debated topic to this date, so their own personal perspective is not able to be considered. Similarly, the date of its writing is not known. Manuscripts state that it was written across six authors during the reigns of Diocletian and Constantine, but Hermann Dessau argues that it was written by one author at the end of the fourth century (Meckler 1). Additionally, many details supplied by the Historia Augusta are not factual and seem to have literary distortions (Rohrbacher 149). However, it seems that the details of the lives of the early emperors such as Hadrian were backed by a reliable source (Rohrbacher 175).

*Vitruvius’ De Architectura*, the only surviving ancient Roman text about architecture, is another example of a source from this era that is useful for contextualizing the Wall, but the text is from about a century earlier during the rule of Augustus. Specifics regarding Hadrian’s Wall cannot be found; however, insights into what general building methods were used are available.

Volumes that have come out in more recent years rely on these primary sources, compiling many of them into a more cohesive description. The fact still remains that these works
are still narratives and are not an exact timeline of events. Concrete evidence is often sparse, so interpretations must be made by the author using context.

In this paper, I aim to offer that Hadrian’s Wall significantly increased economic prosperity while the construction and aftermath led to a merging of cultures between the Romans and Britons. Consequently, a social, economic, and political shift occurred creating a unique frontier area.
Romanization

Romanization is a key term to understand in order to contextualize the unique environment that was created by Rome’s presence in the form of Hadrian’s Wall. Romanization in its simplest form would be a process when a non-Roman community adopts Rome’s socio-cultural and material practices during periods of territorial expansion (Kingsbury 2). Also, it must be taken into account that Romanization caused different cultural identities locally, regionally, and across the Empire necessitating Romans to interact with Romanization in order to form their identity (Gosden 197).

There were many different ways in which Rome could impose its culture on non-Romans. There was conquest, colonization, trade, and also resettlement of soldiers following retirement. Each of these allowed for Rome to gradually expand over the centuries and led to its cultural practices spreading throughout the Empire. Thus, Romanization was a form of cultural imperialism manifesting itself by changing all areas of culture including language, family norms, and material culture. Material culture is the easiest way to measure this phenomenon. Archeologists can unearth pottery, general items, architecture, and art. Each of these artifacts allow a glimpse into the cultural identity of the people who lived in that area.

Material culture can be divided into three different subgroups: administrative structures, channel structures, and cultural structures. Administrative structures were those that created a sense of governance such as administrative buildings, military buildings and equipment, and even how a city was laid out (Kingsbury 5). These administrative structures display what the
culture was and where it was moving by signifying the presence of authority in a given area. For example, Rome had the senate house for discussing the civil government of Rome and the forum for an abundance of practices including law courts and public meetings. These structures expressed a unique type of governance and authority.

Channel structures included those that worked together in order to foster an economy (Kingsbury 6). Thus, this is an extensive list including the organization, creation, and utilization of goods. Organization refers to transportation such as the many roads built throughout the Roman Empire in order to hasten the movement of people and goods. These roads allowed for soldiers to be supplied on the frontiers and buildings to be created across the Empire. Where movement was impeded by water, bridges and ports were built. Creation and utilization of goods refers to those goods that were transported over land and sea. Both raw materials and finished goods were needed to supply the Empire’s various needs. The origins of these objects can be ascertained through finding commonalities in their location of use. One example would be amphorae, large storage jars, containing oils that can be traced to various locations across the Empire (Osborn 48). The amphora was in abundant use by the Romans suggesting extensive trade relationships and cultural influence. Moreover, the enormous use of amphora suggests that there was a large population which needed to be supplied.

Cultural structures were those related to art, religion, entertainment, and recreation (Kingsbury 8). Rome had various examples of art in the form of sculptures, mosaics, paintings, and pottery. These all express different types of symbolism and imagery. Sculptures were commonly created out of bronze or marble and could be used to be decorative and/or have a political purpose. Mosaics were frequently found in Roman homes and public buildings. These
elaborate displays made from coloured squares of stone, marble, or other materials suggested great wealth. Mosaics were frequently found in Roman villas displaying agriculture, mythology, or even self portraits. Religious icons included the enormous temples built to honor the Roman gods. They exhibited the people’s identity through beliefs and values. Smaller shrines were even found within homes for household gods where the family could worship. Burial practices are another way in which religious culture could be measured as this was different across different nations. An example of entertainment would be the enormous amphitheatres that provided a space for gladiatorial combat, athletics, and executions. These allowed for thousands of people to view the events boosting Rome’s public spending for its citizens. Recreation includes structures that allowed for daily activities such as buildings for public bathing.
Events Leading Up to the Wall’s Creation

Hadrian’s Wall marks a significant moment in the history of the Roman Empire by designating an end to Roman northern expansion. In previous periods, Rome was constantly expanding. Jupiter in the *Aeneid* stated that Rome would have an Empire without borders, and Roman rulers were expected to continue this trend. Rome started out as a small colonization in Italy until they began to take over nearby colonies allowing for a more defensible landscape. As Rome grew in strength, expansion into Africa and Egypt brought about great wealth and supplies, further fueling Rome’s imperialism.

Caesar conquered a large portion of Britain during his reign in 55 BC. According to the political climate of the era, it seemed that Caesar believed Britain could be conquered within five years (Stevens 14). Progress was mostly halted until Julius Agricola pushed into Scotland during AD 79, but the excursion ended following the victory of Mons Graupius in AD 84. Then, Trajan was too occupied conquering the east through the Dacian and Parthian wars to take up the Caesarian Doctrine. When Hadrian came to power, not only had he already halted Trajan’s eastern expansion, but he also made the decision to erect a Wall to signify the end of Rome’s expansion into Britain (Chisholm 584).
Figure 1: Roman expansion into Britain


According to Tacitus’ *Annals*, Augustus advised Rome to restrict the Empire to within its current borders (Tac. Ann. I.11). Therefore, it is said that Hadrian’s decision to build the Wall
can be viewed as carrying on the will of Augustus. There were those within the Empire who
believed that expansion was over and that Rome has already stretched her boundaries enough to
rule over all who were worth ruling. Dio agreed with Hadrian’s policies of deciding to defend
Rome’s borders while also working to preserve peace (Brunt 466). Additionally, Suetonius
condemned the imperial expansions as unjust, believing it was being done more for the sake of
pride and not for the glory of Rome (Brunt 465).

Rome’s reasons for expanding was a debated topic among the socially elite and the poets
of this age, and there were those who still wished for Rome to expand. For example, Tacitus
romanticized war, stating that it was these moments of unbroken peace that brought about the
greatest events in history (Tac. Ann. IV. 32). Moreover, Florus complained about the inactivity
of the Emperors compared to the previous conquerors of the Republic (Flor. Epit. I. 1). The
divided political climate made it difficult for Hadrian to promote his stance on halting expansion,
as he was met with frequent criticism from Eutropius, Festus, Fronto, and Victor (Isaac 24).

The *Historia Augusta* states that the Wall was created to separate the Romans from the
barbarians pointing to Rome’s ideological position as a group separate from the rest of the world
(HA. Hadrian. XI). The Romans often defined themselves based on what they were not; they
were not barbarians, so they were Romans (Ferris 3). This literary description was used so that
the Romans could decide who they were. However, the concept of division became problematic
because it created a need to demonize the other in order to justify their own goodness. Roman
frontiers, in this view, were seen as dividing lines needing to be protected at all costs. The
boundaries needed militaristic force, because without it there was nothing to defend Rome from
invasion.
Hadrian’s Wall did in fact create a physical boundary between those deemed “civilized” and those deemed “barbarian.” This theory provides a depiction of how a citizen from central Rome would consider the Wall upon first viewing it. Walls have ideological significance for Romans, and there has been a long history of cities using walls for division to signify the end of the city (Osborn 23).

However, houses and farms remained outside of the wall and were still considered to be part of the city. The northern frontier of Britain was not as simple as Rome wished it to be. The Wall did not cause those to the south to be completely enveloped in Roman culture. Rather, citizens on the southern side of Hadrian’s Wall were very similar to those in the north, for before Rome arrived and took over the land, the people were a part of the same culture. Both sides utilized the same clothing, food, and language. It is worth noting that the Wall did not limit travel between north and south of the Wall. People were free to travel through to either side, and they commonly did in order to trade or even visit family members (Osborn 22).

The Wall could be seen as a zone of exchange which controlled the movement of people in an area compared to keeping a certain population in and another population out. Roman frontiers were not defined in the way we visualize them today - as fortified lines dividing one country from another. While there were physical examples of physical boundaries such as with Hadrian’s Wall, most frontiers were just open expanses of land dividing the Romans on one side from the other countries on the other. An analogy could be drawn to America’s westward expansion. There may have been walls surrounding American towns, but there were no walls dividing the Americans from the Indians. Thus, the frontier was more like a zone than a boundary.
The *Historia Augusta* stated that the Wall was created because “the Britons could not be kept under Roman sway” (HA. Hadrian. V). There is evidence that there may have been a war that broke out between the years AD 100 and AD 120 that might have influenced his decision. The tombstone of the Roman Britain governor C. Julius Karus stated that he was decorated for a British war which could have happened while he was commanding the II Asturum in 105 AD (Osborn 30-31). The Roman Historian Cornelius Fronto also mentioned a war during the first century AD in Britain (Osborn 30-31). Coins found during this era portrayed Hadrian with the deity for Britain which was a well documented way that coins have commemorated wars (Osborn 30-31). In response to the unrest, Hadrian sent the general Pompeius Falco from lower Moesia to help control the population, yet there were heavy losses during the process of recovering the territory. The IX Hispana was nearly wiped out in 122 AD facing the indigenous Celtic tribes necessitating sending the VI Victrix from lower Germany to Britain led by the general P. Tullius Varo.
However, this unrest does not completely justify why a wall should have been built. There have been many frontiers with unrest over the course of Rome’s history, but these did not warrant the creation of a wall. The choice for Britain also could have been to establish Hadrian’s rule there not over the populace, but the generals stationed there. A wall would make a clear statement that northern Britain was the Emperor’s territory. Generals could be unruly and stage a coup d'etat, and Britain was far enough away from Rome which could have caused a decrease of influence in the region.

Upon arrival, Hadrian honorably discharged fifty regiments most of whom settled in Britain. The discharge was primarily due to mass of auxiliary regiments stationed here that were recruited from local populations. In AD 122, a portion of the Sixth Legion was sent northward to Eburacum to seize the fortress there while the rest sailed to the Tyne where they set up two altars. Sacrifices were made to Neptune and Oceanus resembling the ritual performed by Alexander the Great 450 years earlier on the River Hydaspes upon the end of his Indian campaign (Birley, The Restless Emperor 130). Similarly, coinage also depicted Oceanus to symbolize Hadrian’s embarkation into Britain (Birley, The Restless Emperor 131). Next to the altars, there was a bridge set up across the River Tiber named “Pons Aelius” or “Hadrian’s Bridge”. Hadrian played an administrative role with its design, and Hadrian’s Bridge became the starting point for the eastern portion of the Wall (Birley, The Restless Emperor 131).
There have been no primary sources detailing Hadrian’s thought process for creating such a large Wall, but the idea behind creating a Wall may have come from his trip to Greece ten years previous where he saw the Long Walls joining Athens with the Harbor of Piraeus (Birley, The Restless Emperor 133). However, this idea may have also come from his vast knowledge of history which has depicted multiple walls protecting the borders of civilizations such as the wall at Thermopylae and Isthmus (Birley, The Restless Emperor 133).
Physical Characteristics of the Wall

Following the Roman expansions of Agricola, the Roman border was then moved to the Stanegate, a road connecting a collection of forts reading from east to west: Corbridge, Newbrough, Vindolanda, Carvoran, Nether Denton, Brampton Old Church and Carlisle. Corbridge, Vindolanda, Carvoran, and Carlisle were the original forts founded between AD 69 - AD 96 while the other forts were founded later. These forts were most likely erected before Hadrian’s Wall considering their irregular placement. They averaged around 5 miles from each other, and were not in contact with the Wall.

Figure 3: Map of the Stanegate Frontier

([http://www.odysseyadventures.ca/articles/hadrian-wall/article_hadrianswall-thewall.htm](http://www.odysseyadventures.ca/articles/hadrian-wall/article_hadrianswall-thewall.htm))
The *Historia Augusta* states, “[Hadrian] was the first to construct a wall, eighty miles in length” (HA. Hadrian. X). Hadrian’s Wall was eighty Roman miles in length which is equal to seventy-three English miles. The Wall extended across northern Britain from the fort Wallsend on the eastern edge to the fort Bowness on the western edge. The eastern edge after the River Irthing was made out of stone and was around ten feet wide, some sections were more narrow, and around twenty feet high. The western edge up to the River Irthing was made from turf twenty feet wide and eleven feet high. Initially, this portion of the Wall was made out of turf instead of stone due to the lack of limestone in the area. Later, the western Wall too was slowly turned to stone to match the dimensions of the rest of the Wall. Hadrian’s Wall took the legions around six years to complete.
Every third Roman mile there was a turret providing further supervision on the land to the north. These were on the southern side of the Wall, and rose to just above it so that the soldiers manning it could observe the frontier. The turret consisted of a staircase, an observation room, a signalling station, and a shelter for the soldiers at the bottom of the turret. Turrets were manned only temporarily while patrols were sent out.
Every Roman mile there were milecastles providing gateways for those to pass through the Wall from either side. These milecastles allowed for the Romans to control the movement of people and goods in the area. They also acted as a post where the Romans could tax those crossing the border. The milecastles were sixty to seventy feet wide and fifty to sixty feet long, and could house up to one hundred men. These encampments provided soldiers to man the nearby turrets and were the first line of defense for the border.

Figure 5: Map of the forts on Hadrian’s Wall

(https://followinghadrian.com/2014/01/21/walking-hadrians-wall-images-from-milecastle-42-to-milecastle-37/)

About twenty-two feet on the northern side of the Wall there was ditch called the fosse that added to the defensibility of the Wall. It was cut in a V-shape with a flat bottom. Normally, the ditch was about thirty-five feet wide and ten feet deep. On the southern side, there was also a
ditch spreading from Newcastle to Dykesfield which was 7.5 miles shorter than Hadrian’s Wall called the Vallum. The Vallum confused historians for many years. While the northern ditch could be used to keep out barbarians, the southern ditch was placed between the Wall, and Roman settlements in Roman Britain. Some historians have guessed that it may have been a second defense in case that the Wall fell, but this does not make sense considering that Romans did not fight on top of walls (Osborn 25). Instead, they used their military organization and superior weaponry to crush their opponents. In addition, there were walls of dirt on both sides of the ditch making both sides equally defensible. Another theory would be that the Vallum could provide protection from rebellion that might be incited on the southern side of the Wall; however, this was also unlikely considering the presence of the dirt walls (Osborn 25).

![Figure 6: Hadrian’s Wall including the northern ditch and the Vallum](http://www.romeacrosseurope.com/?p=6272#sthash.rqwBKTcd.dpbs)

Rather, the more accepted theory was that the Vallum forms a sort of military zone dividing the civilians from the soldiers (Osborn 25). Division was a common concept in Rome such as their division of barbarians from civilization. Similarly, civilians and soldiers were two
completely different forms of life. One example would be that soldiers were paid in coin while villagers only had the crops from their labor that were traded for other goods through barter. Civilians were also not allowed to have swords and soldiers were not allowed to enter cities (Osborn 25). Notably, soldiers were not allowed to cross the Rubicon into Italy which was done by Julius Caesar when he staged a coup d'etat against Rome. The Vallum could be seen as the northern extension of civilization where beyond which belonged to the military.
Materials of the Wall

Creating Hadrian’s Wall in only six years was an enormous undertaking by the Romans. The immense construction project emphasized the strength of the Roman road system because it allowed materials to be quickly taken to their designated sites. Constructing the Wall needed countless man hours along with tonnes of sandstone and mortar. Sandstone was available near the Wall making it a convenient and strong material to become one of the Wall’s core components. However, various different types of sandstone were needed in order to fill different requirements of the Wall. Some sandstone needed to be shaped into different orientations such as arches for gateways while others needed to be extremely large and durable in order to form foundation of the Wall. Some needed to be thin and durable to form the facings for the Wall and other structures. Additional materials such as stone and clay were used to form the core of the Wall.

There were many different materials and transportation logistics needed to build the Wall (Kendal 133-145). The various requirements forced the builders to travel to diverse areas in order to find supplies. Sandstone was prevalent in the center of the Wall and in the east but not as available in the west explaining the initial building of the Wall with turf in that area. Additionally, various demands for the specifications of the stone required the builders to go to multiple different quarries. Estimations were calculated using one quarry in order to build five kilometers of the Wall, and obstacles of the landscape were factored in by an additional 15% added to the straight course distance. Sandstone that could be shaped was difficult to find and would have taken the longest journey for the Romans to find. It was estimated that it would take an average of thirteen kilometers to retrieve the sandstone from the source. Stone used as
foundation for the Wall and other buildings such as turrets and milecastles would not have been as difficult to find, as the journey would have taken an average of seven kilometers. Stone used to form the facing of structures were an average of 3.75 kilometers away. Lastly, stone used for the core of the Wall was the least difficult to obtain, for it was located only two kilometers away. The total amount of stone used was roughly 119,000 tonnes for shaping, 372,500 tonnes for the foundation, 1,531,500 tonnes for the facing, and 1,334,500 tonnes for the core. Clay was also needed to help fill the core of the Wall. The clay was found under ground and was easy to find where there were ditches dug, such as for the Vallum and the fosse. However, at times these ditches were obstructed, so clay could be found about 1.75 kilometers from the Wall. The total amount of clay used was about 356,000 tonnes.

Mortar created with sand, water, and lime was used in order to fuse facing stones to different structures on the Wall. Sand found from riverbeds and pits were roughly 4.75 kilometers away from the Wall. Access to water varied across the Wall’s expanse and was roughly two kilometers away. The total amount of sand was approximately 133,000 tonnes, while the total amount of water was 6,200 tonnes.

Vitruvius said that a proportion of 2:1 for sand found in a river and 3:1 for sand from a pit was ideal to form mortar (De architectura II.V.I). Estimations used 2.5:1 for the total, because there were a variety of places to obtain sand. Lime is not naturally found and is formed through a chemical process by burning sandstone in a kiln. Two to three weeks later, calcium oxide starts to form on top of the rock which is then removed, placed into pits, and then water is added causing a chemical reaction. Following a two to three week period, calcium hydroxide is formed that turns to a putty that can be mixed with sand to form mortar (Dix 131-138). However, rain
and the cold would disrupt the ability of the mortar to properly bind, forcing the Romans to work only within certain seasons. The total amount of lime used was roughly 41,200 tonnes.

The turf used to build the western portion of the Wall was abundant and could be found near the Wall. It was challenging to take turf from rocky ground, wooded areas, and high ground between the River Irthing and the North Tyne River. Around 80% of the turf was likely found within one hundred meters of the Wall and 20% was taken from areas 0.15 kilometers away from the site. The total estimate for turf used was 1,204,500 tonnes. Wood was also needed as scaffolding for construction, along with burning for limestone and metalworking. The extensive need for wood caused Romans to travel to many different areas to retrieve it so that they would not completely strip away the landscape. Large trees were needed for the building of structures, and this alone required over 600 acres worth of woodlands. Lime burning and metalworking did not necessarily require large trees; however, it required an extensive amount of timber. One tonne of lime required 1.6 tonnes of timber to burn, and one tonne of metal required 6.4 tonnes of timber. The total requirement for these two processes was almost one thousand acres worth of woodlands, and the total amount of timber used was about 86,250 tonnes.

Metal was also used for the creation of Hadrian’s Wall. Evidence from Chesters shows metal being used for bridges and doors (Hanson 209-305). Metal was also likely used for nails. About two hundred tonnes of metal were used for the Wall and its various other structures. The iron was likely purchased at ports on either the eastern or western portion of the Wall, and it would have taken an average of thirty-five kilometers journey to bring back to the required areas. Materials were also required to build roofs, whether they be tiled or thatched. These materials were an average of seven kilometers from the Wall and totaled around two hundred tonnes.
The enormous sum of materials needed to be transported by a variety of vehicles. Vehicles were mainly created out of wood, and remnants have been found at Newsteads while Vindolanda tablets referenced the presence of wagons (Greene 38; Bowman and Thomas 125-142). The best explanation of vehicles used by Rome during the construction of Hadrian’s Wall are found within the *Codex Theodosianus*. The *Codex Theodosianus* is a compilation of Roman laws that explains the guidelines for various vehicles and the weight limits allotted to the vehicles at the time (*Codex Theodosianus*, VIII.5.8; VIII.5.30; VIII.5.47). The laws within the *Codex* describe the four main forms of transportation and the weight restriction set in place in order to minimize wear on the road. The *Codex* was written by Romans in the early fifth century, but it is unlikely that vehicles used in the construction of the Wall differed from the ones described in the *Codex*.

It is important to take into consideration that the descriptions from the *Codex* were for well paved roads and not for the rough terrain near the Wall. While the *Codex* was useful for understanding restrictions on imperial highways, it is reasonable to assume that vehicles pulled a much larger load than what the *Codex* recommended in order to speed up construction. Thus, the *Codex* provides a starting point to gain insight to how much weight the Roman vehicles actually carried. Ox carts used for the erection of the temple at Epidauros carried up to 1,100 kilograms, which was larger than suggested by the Codex, so a 75% allowance was added to the *Codex*’s value to calculate an estimated carrying capacity for the vehicles (Burford 184-191). The speed of these vehicles depended on both the load they carried and the animals that pulled them. Oxen were used for larger loads because they were strong and accustomed to difficult terrain, but they were much slower than horses or mules that were used for smaller loads.
The first of the vehicles used to assist in the construction of Hadrian’s Wall was the post-wagon (*angaria*) that was restricted to 490 kilograms according to the edict, but its maximum capacity was about 850 kilograms. The wagon was pulled by six to eight oxen at an average speed of 4.8 kilometers per hour (Ransford 8). Post-wagons were used to carry the heaviest loads, including 50% of the foundation, shaping, facing stone, and 50% of the larger pieces of timber. Another vehicle used was the post-carriage (*raeda*) that was restricted to 325 kilograms and could pull a maximum of 600 kilograms. The post-carriage had a similarly large load and carried the same materials as the post-wagon, 40% of the core stone, 50% of the smaller timber, and 100% of the metal. The carriage was pulled by eight to ten mules or horses at an average speed of 4.8 kilometers per hour (Ransford 8).

Another vehicle used was a cart (*vereda/carrus*) that had a 200 kilograms weight restriction and could pull up to 350 kilograms. The cart was pulled by four to six mules or horses at an average speed of seven kilometers per hour (Ransford 8). Carts were used to carry 40% of the core stone, 50% of the clay, 100% of the sand, and 50% of the smaller timber. A two-wheeler (*birota*) was also used, having a weight restriction of 65 kilograms and could pull up to 120 kilograms. The two-wheeler was pulled by two to four mules at an average speed of eight kilometers per hour (Ransford 8). Two-wheelers carried 20% of the core stone, 100% of the lime and water, 20% of the turf, and 100% of the roofing material (Kendal 143). Eighty percent of the turf was carried by hand or handcart due to its close location to the Wall. In total, the Wall required 4,050 post-wagons, 5,650 post-carriages, 2,300 carts, and 2,750 two-wheelers per year to complete.
The Wall’s Effect on the Land

Hadrian's Wall was a significant undertaking, and cost an enormous amount of resources to create. Pollen records can be used to understand how vegetation at Walton Moss, Glasson Moss, and Fozy Moss changed due to the Wall. Walton Moss is a raised wetland located three kilometers north of Hadrian's Wall near Stanwix and Castlesteads. Glasson Moss is lowland wetland located 0.5 kilometers south of the Wall, and it is sixteen kilometers west from Carlisle. Fozzy Moss is a wetland two hundred meters north of the Wall and Sewing Shields.

Figure 3: Map showing location of the sites
(Dumayne and Barber 166)
Various anthropogenic indicators in the area give evidence to what occurred before and after the creation of Hadrian’s Wall (Dumayne and Barber 167-170). During the Iron Age before the Roman invasion around 90 BC, Walton Moss was subjected to a large increase of deforestation marked by the decrease of arboreal pollen. There was also an increase of buttercups, mustards, dandelions, and wheat, suggesting that ranching and farming followed after the land was cleared until AD 65. The data suggest that there was likely a population in Walton Moss that was expanding and more food and land was needed to accommodate the growth. The pollen then began to plateau before starting to increase again suggesting that the population in the area started to decline, possibly due to internal warfare between indigenous tribes. Similarly, Glasson Moss showed a decrease in forests and an increase in cereal plants suggesting an increase in farming. Fozzy moss showed a limited impact that mostly included the clearance of shrubs.

Following the Roman invasion, the landscape began to change during AD 71-83. Walton Moss showed forest regeneration most likely caused by halt of forest clearance during the resistance of the Britons against the Romans. The need to fight limited the Briton’s ability to grow their settlements. The landscape shifted once again following Hadrian’s decision to build the Wall between AD 122-128. There was a large decrease in forests in Walton Moss caused by the need of timber used to construct the buildings that composed the Wall in areas such as Carlisle, Stanwix, and Birdoswald. Deforestation continued following the Wall’s creation suggesting that the native population slowly began to settle on the land after their failed revolts. Likewise, forests dwindled at Glasson Moss to build Bowness, Burgh by Sands, and Drumburgh. On the southern side of the Wall, the forests diminished due to the need to supply the growing
Roman and native population. Fozzy Moss showed almost complete deforestation in order to build Vindolanda, Carrawburgh, Carovan, Great Chesters, Chesters, and Housesteads. There was also an increase in cereal pollen in this area; thus, the land in the area was most likely turned into a large area designated for agriculture following the creation of the Wall.
The German Frontier

The Wall’s effect on Romanization is made especially apparent when comparing the Northern Britain frontier to the German frontier. The German frontier is a great point for comparison because both the people of Britain and the people of Gaul shared the same Indo-European language, culture, and genetic origin. The word “Keltoi” or “Celts” first started to appear in literary texts during the late sixth century BC written by the Greek Geographer Hecataeus of Miletus. While the Greeks called these people “Keltoi” the Romans decided on the term “Gauls” (De Bello Gallico I.1). Although those in Britain had the same heritage as the people in Gaul, classical authors did not term them Gauls. Hecataeus deemed the Celts “barbarians” and stated that they inhabited the region of southern France (Tierney 194). The Celts were the first adversaries of the Mediterranean world. During the fourth century BC, the Celts started to invade the classical world causing battles to rage until the Romans were able to mostly subjugate the Gauls during first century BC.

The people of Gaul received the same demonization as those in Britain which was reinforced by the bitterness of the sack of Rome around 390 BC and Caesar’s propaganda. Caesar emphasized their barbaric nature by claiming, “In Gaul, not only in every state and every canton and district, but almost in each several household, there are parties; and the leaders of the parties are men who in the judgment of their fellows are deemed to have the highest authority, men to whose decision and judgment the supreme issue of all cases and counsels may be referred” (De Bello Gallico VI.11). Throughout the first seven books of the De Bello Gallico, Caesar claims that the Gauls are impulsive, emotional, and scatterbrained therefore justifying military action (Gardner 185).
In addition to the Gauls, Germanic tribes also inhabited the German frontier. The Germanic tribes mainly resided to the east of the border, but some were within the Roman empire at the inception of the frontier. Germanic tribes had a large influence on their Gallic counterpart due to their close proximity. Caesar believed that being barbarian did not need to be a permanent state of being, and they could be civilized (Roymans 100). This ideology was extended to those of Gallic origin because they had been successfully Romanized to the south. However, those of Germanic origin were not able to be converted in Caesar’s eyes. He stated, “Their whole life is occupied in hunting and in the pursuits of the military art; from childhood they devote themselves to fatigue and hardships” (De Bello Gallico VI.21). He also proclaimed, “They do not pay much attention to agriculture, and a large portion of their food consists in milk,
cheese, and flesh” (De Bello Gallico VI.22). Caesar believed these people to be “children of war and robbery,” and because Rome agreed with his ideology, a distinction between the Gauls and Germans was created (De Bello Gallico VI.35; Roymans 101).

The focus of the comparison between the first and third century AD is noteworthy because this era was the end of Domitian's Gallic conquests followed by the solidification of the Gallic frontier. Vespasian began the inception of the frontier in Germany through securing the land and developing roads. In turn, he formed a better line of communication between the Danube allowing for it to be defended more easily (Drinkwater). Following his death, Vespasian was succeeded by Domitian who waged a war against the Chatti tribe living in the Taunus mountains in 83 AD. After the war, Domitian began the creation of the Upper German limes, fortifying Rome’s outer frontier. In 85 AD, the Danube became an increasing threat causing a reallocation of the territory’s troops leading the expansion into Germany to a halt. Furthermore, in 88/89 AD the Commander of the army in upper Germany, Antonius Saturninus, staged a revolt aided by the Chatti. Although the coup d'etat uprising was quickly put down by the army in Lower Germany, the events resulted in Domitian giving up expansion into Germany and instead securing the Rhine frontier. Between 90 and 96 AD, auxiliary forts were erected across the eastern portion of Germany creating the ‘Alb-limes’ joining the other forts across Upper Germany.

The enormous length of the German frontier caused forts to the south to be abandoned in order to fully defend the frontier. With these forts abandoned, settlers from Gaul were allowed to settle the lower Rhine area under the expectation that they would pay one-tenth of their produce
to the government. The people were allowed to self govern allowing for the native population to slowly transition to their new way of life under the influence of Roman culture.

Under Hadrian, the Germanic frontier was further solidified by creating a wooden palisade across the Upper German land frontier while leaving the Lower German river frontier untouched. The Romans then used their naval superiority to guard the remainder of the frontier bordered by rivers. The Historia Augusta states, “During this period and on many other occasions also, in many regions where the barbarians are held back not by rivers but by artificial barriers, Hadrian shut them off by means of high stakes planted deep in the ground and fastened together in the manner of a palisade” (HA. Hadrian. XII).

Similar to the British frontier, the Roman military had an enormous impact on development for the Gallic frontier. The soldiers were paid in coin causing both an influx of traders flocking to the region to profit and the beginning of the monetisation of the native economy (Roymans 59). Roman goods were able to be purchased at a market that had previously been restricted to the elite.
Military Life on the Wall

Legions were the ones mainly tasked with building Hadrian’s Wall. After the Wall was finished, the legions stayed in the south and there was rarely a reason for them to come north. The only exception was in the event of an attack, but they were not the first to respond to an invasion. Those mainly tasked with guarding the wall were auxiliary troops. During the first and second century, they were used as the first soldiers to engage the enemy in Britain while the nearest legionaries were located at York, a four day march away. The auxiliary soldiers were recruited outside of Italy and served the Empire without being citizens until 212 AD when the Roman Emperor Caracalla gave universal citizenship to the free men of Rome. Auxiliary troops were larger in number than legionaries, but they were less trained and did not have the same skills such as the ability to create siege engines and buildings. Their lack of certain skills made them more expendable, but they were also more versatile than legionaries regarding their own skill sets. Rome recruited units such as cavalry, slingers, and archers from various areas that they had conquered. Trajan’s Column depicted the auxiliary units as extremely useful as they fought most of the battles while the legionaries were kept in reserve.

On the Wall there were three wall forts designated for infantry; Housesteads, Great Chesters, and Birdoswald. Each of these wall forts were stationed near the center of the Wall that was high up and not accessible by cavalry. Another fort for infantry was Vindolanda, but this fort was just south of the Wall. Cavalry needed open areas to move around, so they were stationed at Stanwix, Benwell, and Chesters. The other forts contained mixed infantry numbers, for instance, Carlisle on the west coast and Wallsend on the east coast. A variety of soldiers needed to be dispersed across the Wall because of the different purposes they served. The infantry were less
maneuverable compared to the cavalry, but they could be used to chase the enemy across more
difficult terrain.

Daily life on the Wall was much more tame than Roman fears would suggest. The
Auxiliary troops stationed on the frontier did not engage in much combat. Raids were
uncommon, and full invasions were even more infrequent. Most of their time was spent
patrolling the frontier, training, and working in workshops; but, they also had a lot of free time.
Dice and gaming cubes were found at Vindolanda suggesting gambling (Osborn 55). There were
also plenty of boars, wolves, bears, and deer around for hunting (Osborn 55).

Soldiers were permitted to request leave (commeatus) from their superiors, so they could
visit their families. Although, some reports at the fort Vindolanda showed that they were missing
nearly half a cohort, which was too significant of an amount to lose to retirement, death, or leave
(Osborn 45). These discrepancies were most likely due to the soldiers being moved around to be
stationed at other forts. This would have been done in order to prevent boredom and so that the
soldiers may become acclimated to different types of terrain in case they needed to fight at
another portion of the Wall.

Lower ranked soldiers were not allowed to marry so that they could be moved around at
any time. Nonetheless, many participated in illegal marriages and had families in nearby
settlements. On the other hand, fort commanders were allowed to marry and lived in beautiful
villas near the center of the fort. These villas were even comparable to those of Roman elite
which was in stark contrast to the living conditions of the regular soldiers who were housed
eighty men to a barrack.
Figure 6: Layout of Wallsend Milecastle

(https://www.odysseyadventures.ca/articles/hadrian-wall/article_hadrianswall-forts.htm)
VICI

One of the legionaries greatest skills was replacing dirt roads with more efficient stone ones, and these roads were the key to the strength of the Roman Empire. These roads allowed for more shipments to be brought in stimulating the economy of local populations. The majority of the population in Britain region were farmers, and they still had primitive agricultural techniques that severely limited the amount of food they could produce. The small surplus was usually traded to their neighbors for a portion of their produce. Many of these farmers had landlords that needed to be paid in order for them to work the land causing their profits to diminish.
Figure 8: Map of the roads in Roman Britain at 150 AD

(http://www.themotormuseuminminiature.co.uk/part-2-romes-gift-to-britain.php)

William Marshal’s book on rural economy during the eighteenth century stated that Cotswold farms in Britain averaged around five hundred acres (Reece 6). The farmers of the third century had similar farming practices as those in the eighteenth century. The Doomsday Book that was written during the late eleventh century by King William the Conqueror estimated that fifty acres would support a small family (Osborn 11). The book stated that there was roughly twenty million acres of farmland in Britain, with an average household population of five creating a rough estimate of two million inhabitants in this region (Osborn 11). So, statistically the Roman army only raised the population by 2%. However, the impact of these Roman soldiers was much more significant than statistics suggest. The Roman army was paid in coins which were extremely rare for rural populations to see and were selectively available for the upper class, merchants, or store owners. Thus, the increase in the prevalence of coinage greatly stimulated the economy and led to settlements arising next to forts.

Many people came and formed settlements in order to profit by providing for the fort’s inhabitants through goods and leisure activities. These settlements were called vici and were not as big as a town. Vici were rarely fully excavated because the main interest in the area would be the forts. However, preliminary excavations have shown rough outlines of the main structures that stood here. The main buildings were strip houses which were long and thin rectangular structures. Strip houses were also commonly used as shops. Some vici were better established
than others and contained temples and even walls. *Vici* averaged around 30 houses, and even bigger ones resided closer to main roads where trade was more prosperous.

![Figure 7: Example of Housesteads and its *Vici*](https://followinghadrianphotography.com/2018/09/12/housesteads-roman-fort-vercovicium/)

The social structure was different in northern Britain compared to towns in Italy or even in towns in more southern Roman Britain. The forts owned the land that *vici* were built upon, so they were all subject to them. Fort commanders would control the council of the *vici* or have fort officers within the council (Osborn 71). Those within the *vici* included the Romans, indigenous Britons who lived on the land before Rome took it over, and foreigners from other parts of the
world such as Germany, Syria, and Spain discovered through tombstones unearthed at these sites (Osborn 69). The wages of the soldiers stationed here provided a great opportunity for people to become wealthy. These traders acted as economic liaisons between the Roman soldiers and the British inhabitants who were not used to coins. However, this is not to say that there was a monetary exchange economy in place. Rather, coins were likely limited to paying taxes and commerce between traders and the army (Howego 277-278). The Roman bathhouses were even built in these vici providing an enjoyable break from the cold weather for civilians and soldiers alike symbolizing their complementary relationship. The huge variety of traders allowed for shopkeepers, gold smiths, and merchants for the inhabitants to buy from. There was also a lot of opportunities for leisure activities through bars, inns, and brothels.

It was difficult for these vici to become towns because of the social structure they were brought up in. They were subject to the forts which truly put them apart from the rest of Rome. Towns closer to Italy had their own administration allowing them to have buildings designed for law such as a basilica and a forum for people to voice their grievances. Central Rome also had a different ideology where spending money for the good of the other inhabitants brought social stature and with that power. This spending was done through feasts and festivals but also went towards civic buildings or paying upkeep. Thus, beautiful temples and statues were erected adding to the glory of that town or city. Even the Romano-British in southern Britain could gain power through spending their money. They were allowed to become priests or magistrates allowing them to oversee cases of law or be a part of the governing body. However, the outrageous spending brings to mind Trimalchio in the satire Satyricon where even a freedman
can put on an elaborate show of wealth to garner social status demonstrating that displays of wealth were needed in order to validate one’s upper class status.

In contrast, the elite in the *vici* were much different than those in central Rome. They gained their wealth through trading which was contrary to the elite who got their wealth through agriculture. The elite in the *vici* also did not spend their wealth the same way. Large houses were uncommon and most still lived in strip houses like the other residents. However, some *vici* such as Carlisle and Corobridge were more prosperous than the other *vici*. Carlisle had two large homes, but they did not have the lavish interiors of Italian houses with mosaic flooring and beautiful wall paintings. One house had a large yard that would likely be used for loading and unloading cargo for trade suggesting that it was built with practicality in mind (Osborn 76-77).

Corbridge was half the size of Carlisle and did not have any large homes but there was significant community spending suggesting a wealthy community. There were eight thousand coins unearthed which was significantly more than any other *vicus* and allowed for more community spending. A large unfinished courtyard was found that looked like the beginnings of a forum. Workshops, granaries and even a small aqueduct were present. Corbridge probably served as a supply network for the forts. There was also a wall built that would not have been possible without the consent from the fort.

Native homing on the German frontier was present in *vici* during the first century, but during the second century they were replaced by strip houses (Roymans 76). The material integration in these *vici* was more limited than those in Britain. One example from a private house in the *vicus* of Oberwinterthur had very little amounts of amphorae which was unlike a typical Romanized household (Maxfield and Dobson 436). While there was Roman pottery,
much of the pottery found was an imitation of Roman pottery that were larger than the originals. These dishes would have reflected the native custom to share drinking vessels and other items while the Romans usually had personal dishes. Thus, new Roman eating practices did not replace native customs, but they instead supplemented them. Fibulae, an ancient brooch used to fasten clothing, continued in use during Roman occupation though the style did change suggesting that the men did not adopt the Roman toga in Germania Superior. The women had very similar clothing in Celtic and Roman cultures, so Roman influence did not affect the women. Large amounts of coins were also found at these vici, but this was due to the army and the local populations likely did not change their native trading practices (Maxfield and Dobson 437). Though the natives were being occupied by the Romans, their cultural practices did not substantially change.
Rural

Rural settlements refer to those that are not military or urban in nature. Rather, these settlements are based around agriculture. Example of military settlements were explained above such as the milecastles and fortresses. Urban settlements were those with a commercial purpose such as the *vici*. Northern Britain is a variable landscape with highlands that had infertile soil and lowlands of coastal plains and river valleys with fertile soil that have been used by communities for thousands of years before the Romans invaded (Davidson and Carter 45-62; P. Dark 266).

Those in Scotland continued their style of substantial roundhouses despite the Roman presence to the south (Armit 102-116). Substantial roundhouses were larger than the normal roundhouses and were a way that the social elite could display their status (Todd 337). Brochs and duns were stone versions although there were also those made from timber such as crannogs. Though they retained their own versions of homes, Roman culture was able to make its way here through co-operative economic relationships where they would receive Roman goods. Excavations at a broch in Fairy Knowe have found Roman pottery, glass, and coins (Main 400).

The region south of the Wall between York and Durham had a social elite who lived in classic Roman villas. Often, these were created by retired auxiliary soldiers who erected their villas within native settlements (Carroll 71-72). Other villas were created by the native elite who gained further wealth through deals with the Romans, and they helped to govern the native populace in exchange (Halkon and Millett 226). These deals allowed the native elite to earn enough money to live the Roman lifestyle noted by the pottery and other items unearthed at these sites (Willis 101).
However, there was a unique landscape between these two areas. The area surrounding Hadrian’s Wall had no presence of a social elite. There were no substantial round houses or villas excluding the villas of the fort commanders. Before Rome arrived, there was a social elite present to the north and south of the frontier area marked by their larger buildings, but no sites such as these have been found within the central area (Todd 339). The presence of the military may have been needed because of the lack of a social elite to help govern the populace (Todd 339). The military, being the only true hierarchy in the area, caused settlements to arise that were built with the purpose of supplying these forts. The military may have taxed the local populace in order to supply the army through food and animals, and these taxes may have further limited the ability of the region to gain a social elite (Todd 339).

Traditional housing continued in the rural area regardless of the Roman occupation. Roundhouses were scattered across the countryside built out of either stone or wood with thatched roofs. These homes were supported using four posts and included a hearth and a small enclosure for animals (Powell et al. 71). The cosmological model suggests that these buildings were created with the movement of the sun in mind which dictated how the space within was used. Entrances would face the south allowing for sunlight to illuminate a space to work while the northern side would be used for sleeping and storage (Pope 205). The center of the home also allowed for a space to work surrounding the hearth while the peripheral space could be used to house livestock (Pope 221).
Likewise, there was a lack of Roman villas on the German landscape. However, the lack of villas was not due to a lack of social elite. The elite in Germany were likely limited due to the landscape itself, labor being used for urban centers, preference for more traditional structures, and Roman taxation (Roymans 73). Additionally, adherence to martial and pastoral values played a role during the first century causing them to be less receptive to Roman culture (Roymans 73). However, during the second century there was a movement towards a transformation of native farmhouses into villas creating ‘proto-villas’ by the elites (Roymans
The few Roman villas that were created were likely made by Roman veterans suggested by military stamps on roof tiles and remnants of military diplomas (Roymans 190).

Even rural areas of the second century were dominated by native settlements. These houses were similar to those in Britain containing a living section and a stable under the same roof (Roymans 73). There is evidence for more romanized homes in the second century, but they still retained traditional building techniques. One example used posts, aisles, and an indoor stable which are of native style. The building also had Roman elements such as a wooden cellar with a stone foundation, at least one room with wall paintings, and a bathhouse (Roymans 75).
Religion

Religion was an important aspect to those residing on the frontiers. This cultural trend brought people together and was a point of contention between the natives and their newly installed Roman leaders. The Roman military brought many religions with them and set up monuments to Neptune, Minerva, and Mars outside Roman forts, but the number of purely Roman religious dedications was short (Haverfield 68). Instead, there was more of a merging of the gods of the natives and the Romans (Haverfield 68-71). Sulis, the Briton god of sacred waters and healing, and Minerva, the Roman god of wisdom, were synthesized to become Sulis-Minerva. There is evidence of Sulis-Minerva at Bath in Roman Britain including a temple and a sacred spring (Richmond and Toynbee 97). Coins and a leaden tablet inscribed with a curse found within the spring suggest its sanctity (Richmond and Toynbee 97). Moreover, a few other gods attracted the attention of the natives such as Mars and Mercury, and they merged them with Celtic epithets (Haverfield 68). Examples of the merging with Mars include Mars Belatucader, Mars Cocidius, and Mars Corotiacus. The merging of gods allowed the Romans to have the natives begin participating in Roman rituals while keeping their own gods.
There was a similar instance on the German frontier. The deity Magusanus who was associated with war became strongly associated with the Roman deity Hercules. Synthesis between Celtic and Roman gods on the German frontier began during the first century AD, and there has been evidence of votive inscriptions across the lower Rhine area displaying the merging (Roymans 90). In Batavia, Hercules Magmus had been associated with giving special enhancements once a dedication was made by the highest official. A sanctuary at Empel for the Hercules Magusanus Cult had evidence of votive gifts from both Celts and Romans, as this deity was associated with the warrior ideology. The Celts chose to associate Magusanus with Hercules because they both had heroic feats surrounding their mythology (Roymans 92). Additionally, the Gauls and Germans had strong pastoral values and these traits may had attracted them to Hercules. Hercules owns cattle, and fought to protect them which was evident through his battle against the three headed monster Cacus who stole his cattle.
Family Life

Families were a key component to life in Britain. Evidence before the Roman period is limited to the Roman’s point of view and archeological research. Fortunately, the information during the Roman period is much more plentiful with inscriptions on tombstones, altars, and tablets. Families gave the Roman soldiers support and a sense of home while they were being moved away from their original residence. Roman families were usually nuclear in nature with a husband, wife, and their children living in one household. The family had the oldest male ascendant (*paterfamilias*) at the head who had paternal power over the rest of the family including the other adult males. Following the death of the *paterfamilias*, the adult sons would become the *paterfamilias* of their own households meaning they are no longer under paternal power. The widow and younger children would be *sui iuris*, meaning that they were independent, but they required a tutor in order to make decisions for them and control their property. Women had significantly reduced rights compared to men, and they could not own property or have rights over their children. Woman were also married quite quickly in Roman society allowing for bonds to be made between different family groups.

By contrast, the Britons usually had larger households allowing for multiple family groups to live together (Ehrenberg and Ehrenberg 160-161). Their large family provided the means for the members to be self sufficient and live on their own. However, with the new architecture usual to Roman society, these family groups were forced to become much different, as their urban homes did not support such a large family (Todd 274). Strip houses were rectangular, created from clay tiles and bricks, which was problematic due to increased smoke pollution that had negative effects on the populace marked by maxillary sinusitis and lesions on
the ribs (Roberts and Cox 383). Smoke pollution was not an issue before because roundhouses had better ventilation compared to the Romanized homes. Also, the Roman concept of recruitment from local populations took many men from their family units undermining their traditional idea of a family. Further, women had more rights in the indigenous Briton society. They were able to become the head of household, and some had become notable leaders such as Boudicca. The women also married much later than the Romans. Skeletal remains confirm the later marriage age showing that a majority of women waited until they were in their twenties to give birth (Todd 281).

The Wall brought many different people together whether they be indigenous Britons, Romans, or traders from far away lands. Extended families also became more common in Britain. There have been examples in inscriptions of many of the foreigners adopting this trend such as Ursa, a German woman, living with her brothers, sister-in-law, and nephew at the fort Chesters on Hadrian’s Wall (Todd 274). Roman law further supported extended families by having the eldest son be appointed as the guardian over the unmarried women in his family. Thus, many soldiers housed their extended families within their homes at the nearby vici (Todd 274). For example, Lifana lived under her uncle Lucius Senofilus at the vici outside the Carvoran milecastle (Todd 274).

The mixed population led to many mixed marriages which was contrary to the ideal Roman family such as Regina, a catuvellauni, married to Barates, a Palmyrene (Todd 274). Centurions and decurians even took part in mixed marriages and married those from other nations. There was a rule that officers were not permitted to marry those in the province that they
were stationed, but that law was largely ignored (Allason-Jones 42-43). However, many officers were already married once they were moved to Britain and brought their wives with them.

While those with the rank of Centurion and above were allowed to marry, those under this rank could not until the Severan Edict of AD 197 (Todd 282). Claudius stated, “The men serving in the army, since they could not legally have wives, were granted the privileges of married men” (Cassius Dio’s Roman History LX.24). It would be expected that if the military adhered to these laws, then there would be no families for these men during the time that the Wall was built. However, there were those who decided to have informal marriages in order to ignore the law such as Tagamatis, a flag bearer, who had taken on a female companion (Birley, The Roman documents 30). Some even decided to ignore the law completely and decided to marry. Examples were recorded on tombstones of auxiliary and legionary alike. Aurelius Marcus, an auxiliary in the century Obsequens, had a tombstone dedicated to ‘his very pure wife’ Aurelia Aia (Todd 283). At the Chesters milecastle cemetery, Gaius Valerius Justus, a clerk in Legion XX, dedicated a tombstone to ‘his most chaste and pure wife’ (Todd 283). Similarly, there is evidence on German frontier where Romans intermarried with the native populace.

Interruption between Germanic tribes and Romans had occurred as early as the Batavian Revolt in 69 AD. The Tencteri sent an envoy to the Ubii asking them to kill all of the Romans in their territory, but the Ubii replied that their offer was unacceptable because Roman veteran settlers had married their native women creating one unified group (Derks 255). Active duty Roman soldiers also married the natives. M. Ulpius Fronta, a soldier of the Cohors I Batavorum, and Frisian cavalryman from the Ala I Hispanorum Auriana are known from military
diplomas to have married Germanic women (Derks 249). There is also a tombstone signifying the marriage of Romana to the prefect of the Cohors III Batavorum milliaria (Derks 249).

Cassius Dio stated that the Boudiccan troops in the Boudiccan revolt were angry that Britons were marrying Roman veterans (Cassius Dio, *Roman History*, LXII.2.7). However, during the second century marrying Romans became more widely accepted by the natives as Romans had wealth, and their child would become a roman citizen (Todd 275). Many retired Roman soldiers settled in nearby *vici* with their native wives leading to a unique family dynamic in the military zone. The children brought up in these families had parents who spoke different languages and had different religious beliefs causing their children to have a confusing identity. Latin would have been used for public occasions while the parent’s other native languages were being used around the household. This environment would have allowed the children to speak many different languages. While a multicultural background is beneficial linguistically, the background may have also lead to a stressful environment because of the conflicting cultures leading to family breakdowns or behavioral problems (Todd 277).

Romans had shrines within their homes needing to be tended to by the wife while the *paterfamilias* would be obligated to complete the religious duties for the family outside the home. One German soldier named Maduhus made a dedication to the goddess Coventina for himself and his family while there is another example of the woman taking it upon herself to do the dedication (Todd 277). Some rites of Roman religious ceremonies required all those in the Roman Empire such as the cult of the Deified Emperor Jupiter, so the wife would be expected to attend (Todd 277). Obligations like this would have made it difficult for the wife to follow her own religious traditions and made it clear how different their cultures were.
It was difficult for the families to prosper before the Servian Edict. Rome’s stance stating that soldiers were not allowed to marry relieve Rome of any burden to support the soldier’s wives following retirement. Consequently, there would be no support given to them if a soldier would be stationed somewhere else and their family needed provisions to help with their move. The children before the Servian Edict would have been classed as illegitimate making difficult for them to make any claims to their father’s inheritance regardless of a written will (Todd 282).

While monogamy was normal for the Romans and some of the Britons, polygamy was present in northern Britain because of the immigrants and auxiliary troops who had polygamy in their cultures. Army retirement diplomas at Vindolanda acknowledge the polygamy by stating that, “with those who are their wives at the date of this grant, or in the case of the unmarried, any wives they may subsequently marry, provided that they only have one each” (Frere et al. 347-348). These diplomas necessitated that the wife was legitimate and showed that the Roman army acknowledged that there were those in the army in polygamous relationships (Todd 277).

Some tribes in Roman Britain might have also practiced polyandry. Julius Caesar stated, “Ten and even twelve have wives common to them, and particularly brothers among brothers, and parents among their children; but if there be any issue by these wives, they are reputed to be the children of those by whom respectively each was first espoused when a virgin” (De Bello Gallico, V.14). However, this view may have been a misunderstanding as in their legal system where a widow becomes the wife of her new guardian (Todd 278). Another possibility would be that fertile widows were given to the brother of their husband in order to keep families from dying out which was a common system during times of war across cultures (Todd 278).
The evidence is not clear, but it is likely that many Britons held onto much of their native culture regardless of the Roman military presence surrounding them. Mixed marriages formed with people of different cultural and religious beliefs leading to a complicated family unit. Regardless, these families still served their purpose as a unique support group on the frontier.
Trade

Vast amounts of food and other supplies were needed for the upkeep of the inhabitants of the forts. Bringing in supplies was done through trade between nearby civilians and other countries. Factories in other parts of Rome also helped to supply the forts. The Roman Republic allotted various permits to soldiers to purchase items at a set price which was different than the market price. Requisition, as it was called, allowed them to buy things more cheaply, but this was not always guaranteed. While prices were lower, soldiers could purchase items from the open market.

Additionally, the Roman army owned lands allowing them to produce their own goods. An official document found in Boxmoor Villa in Chilterns stated that the primary use of all equipment produced by the state was for the army (Osborn 48). Factories could be found across the empire, and they produced many different goods. The Romans had factories in Britain such as at Holt in Llwyd, Wales, which produced pottery and building materials (K. Dark 24). One Gallic factory in Trier produced shields while another Gallic factory in Arles produced armor only for officers (Osborn 48). These factories were hundreds of miles away and required professionals in order to transport these items. Tombstones have been found near military supply routes displaying those with the designated profession of negotiators who would have been tasked with completing these journeys (Osborn 48).

Tablets at Vindolanda have lists of goods, amounts paid, and the people involved suggesting trading with negotiators. One example would be a Centurion named Felicio who purchased forty-five lbs of bacon, 15 ½ lbs bacon lard, and other miscellaneous items for fourteen denarii and 4 ¾ asses (Osborn 49). Another tablet stated that Sabinus from Trier was
given 38 ½ denarii and two assess, but the items were not listed (Osborn 49). The large sum of money that was almost two months pay and the lack of information about the items may suggest that he was a routine negotiator (Osborn 49).

Another tablet showed that wheat was given to a man named Lucco within the fort who was in charge of pigs and oxen (Osborn 49). Thus, the fort had its own supply of meat from pigs and oxen; the latter would be used for transportation or ploughing fields. Forts also had other means of producing their own food. Water Mills for grinding flour have been found in the Chesters and Great Chesters forts. The one at Chesters had its water source flow through the east tower suggesting that it was created as a part of the initial building plan. All forts had granaries allowing them to store large amounts of grain for the inhabitants.

However, there were differences between forts, as some were designated as supply bases. Tablets at Vindolanda have shown that requests have been made to them for grain by other forts (Osborn 50). A more obvious example would be the fort of South Shields at its peak that had thirty granaries. South Shields was placed on the Tyne river giving it access to the rest of the Empire through the sea. Similarly, the fort Corbridge was on the Tyne and served the same purpose. On the western part of the Wall, Maryport served as a supply base. These forts were also able to produce their own goods through workshops. Corbridge had areas for producing military equipment while Carlisle had an armor workshop. One Vindolanda tablet stated that 343 men were working in their workshop producing shoes, building materials, wagons, clay, and tents (Osborn 52).

However, goods still needed to be shipped from other areas of the empire regardless of their own production. Another tablet from Vindolanda stated that a man named Metto sent goods
to Advectus through a negotiator named Saco. These items included thirty-eight cart axles, thirty-four wheel hubs, three hundred spokes, and other items (Osborn 52). The order was large, so it was more than likely to supply the fort. Oils left inside amphora allow excavators to determine where these pieces of pottery originated from. Many of the jars, which carried supplies such as wine, olives, and prunes were shown to come from countries such as Italy, Spain, and Gaul (Osborn 52). Pottery from nearby towns was also found within the *vici*. The western Wall mainly had pottery from Dorset while the eastern Wall had pottery from Essex and Kent. The aforementioned pottery was rarely found elsewhere in the Empire suggesting that it came from military factories. Another explanation would be that there was a direct trade relationship between these forts and these regions.
Figure 7: Example of a Roman Amphora

(http://www.ancientresource.com/lots/roman/roman-terracotta-pottery.html)
Food and Disease

The increase of roads in Roman Britain allowed for people to travel more quickly and formed new trade routes for different foodstuffs such as cattle and grapes to be brought in. The best way to track eating habits in Roman Britain is through unearthing different types of animal bones. The types of food one eats is a cultural trend that people grow up with, and they take it with them where they go. In Italy, pigs was the most common source of meat (King 13). Eating pigs was continued in legionary sites south of the Wall where the soldiers retained their Italian culture (King 13). However, closer to the Wall where the forts were manned by auxiliary regiments there have been more cattle bones unearthed compared to pig bones (King 10). Eating seemed to be a part of their own auxiliary identity as German auxiliary sites also had a large portion of cattle bones, and transfers were often made between these two areas (King 11-12). Eventually, the vici too began to mainly eat cattle regardless of their diverse population which was expected considering their close location to the forts (King 3).

On the other hand, unromanized rural sites near the Wall had a higher frequency of sheep and goat bones compared to the romanized rural areas in southern Britain (King 3). These rural settlements, made up of indigenous Britons, did not easily give up their eating habits. While their buildings may have changed, their eating habits had not. However, this was not to say that they did not start eating some Romanized food. Imports were very common, and different types of food were available in their vicinity. Cattle especially became very prevalent because of the forts.

Those in northern Britain also resisted cultural change regarding arable agriculture. The south, with its diverse demands, markets, and infrastructure, was able to quickly add new Roman
herbs, vegetables, and fruits to its rural agriculture (Van der Veen 8). The north lacked these motivations in addition to new agricultural technologies, so its agriculture largely remained the same regardless of the Roman presence (Van der Veen 8). While the north’s arable agriculture could not compete with the south’s production, the indigenous people have been raising animals for centuries and were able to help supply the forts with cattle. For example, at Dragonsby in Lincolnshire the frequency of cattle equal that of sheep, the main source of meat before Roman rule (Todd 375).

There was little Romanization regarding native crops on the Gallic frontier. Natives continued to grow barley, emmer, spelt, millet, oat, and flax instead of wheat which was the main Roman crop (Roymans 79). Corn, another Roman crop, was also not able to be grown here as it could not compete with the higher yield from the southern region that filled military markets. Limitations were also due to limited agricultural tools compared to southern villas. Large production was foreign to these natives who were mainly sustenance farmers growing just enough to feed their family. However, while crops were not Romanized, livestock farming become more Roman. Cattle breeding increased during the first and second century to supply urban and military centers (Roymans 82). They provided meat and cowhide which were profitable. Horse breeding also increased after the Roman period in order to supply roman military markets and cavalry regiments (Roymans 82). The economic effects on the German frontier were very similar to those on the frontier in Britain.

However, this influx of foreign material culture caused new diseases which were not present before Roman influence to appear. There are a couple ways to analyze disease. First, there are inscriptions from the time period, but these can be misleading because the authors may
not have a full understanding on what is occurring. Another option is to examine skeletal remains.

Skeletal remains allow for the analyzation of bone formation and bone destruction that gives further insight into what these people experienced. Indications from bone formation can be in the form of immature bone growth showing the body’s first response to the disease indicating an active disease present at the time of death.

Another indication is mature bone growth replacing the immature bones indicating the presence of a chronic disease. Destruction of bone shows that there was some healing evident in the patient. The immune system is necessary to determine whether a disease is present in the bones because a strong immune system would help replace bone damage while an unhealthy immune system would not. Lesion patterns on the skeleton and the teeth also help to show if a certain disease is present. However, it should be taken into consideration that some of this damage may be done post-mortem.

Infectious diseases and tapeworms started appearing following the importation of infected cattle (Roberts and Cox 389). One of these infectious diseases was tuberculosis, which can be transmitted human to human or from consuming infected meat and milk (Todd 265). The close proximity within urban environments allowed for these diseases to prosper. Leprosy, spread through coughing, sneezing, and breathing, also started to appear as a consequence of the Roman population migrating to this land (Todd 265). Leprosy can be observed by damage to the bones of the face, hands and feet because of the bacterial damage to the sensory, autonomic, and motor nerves. Joint disease and rheumatoid arthritis also had their first appearance at two sites in south England (Roberts and Cox 390). Tuberculosis was reported from Durham to Hampshire (Roberts and Cox 389). Even rare diseases such as pituitary dwarfism and poliomyelitis started
to arise (Roberts and Cox 389). An analogy could be drawn to the spread of European diseases in the Americas following colonization, though it was not as severe as this.

Hygiene and sanitation levels can be examined using bone indications. The main indications for these are pitting and new bone formation on the surfaces of bones. The most common version that occurred was non-specific infections where the pathogen that caused the disease is not known. Factors that influence this are poverty, poor standards of hygiene, sanitation and living conditions (Aufderheide et al.). Over 10% of the skeletons in Roman Britain showed signs of non-specific infections which was higher than the prevalence during the iron age (Todd 265).
Conclusion

The frontier was a unique environment for Roman and native alike. This land marked the end of the Roman territory and the beginning to the territory of the “barbarians”. Because of the Roman occupation, there were different cultures merging together. To the south, the indigenous people were Romanized in a much different way than the north. There was no need for the military to install an administration in the region. Instead, they had a tribal hierarchy which could be controlled by a Roman official. The official would send orders and these would be sent down the chain by the various tribal chiefs. Being surrounded by Roman provinces, Southern Britons were constantly interacting with Romans through trade and other activities causing Roman culture to become gradually intertwined with their own denoted by their wide acceptance of Roman goods and practices. The elites soon adapted the Roman elaborate displays of wealth and built enormous Villas. They bought Roman goods further adding to their luxurious lifestyle and even helped to govern the local populace.

However, at the limit of the Roman civilization cultural influences were diminished. There was no tribal elite within the province making it difficult for the Romans to apply a centralized government necessitating military intervention. The primary source of Roman influence was created by the forts that served as the location for the main administration and the majority of economic activity in the territory. These forts and Hadrian’s Wall created a monumental display of Roman culture and power in the region establishing a strong sense of governance over the population.

Tribal warfare and invasions from the north ended following the construction of the Wall allowing for the people to fully commit themselves to commercial activities. The soldiers were
paid in coins that attracted people to come and provide goods and leisure activities for them. Economic centers called *vici* began to appear next to the forts where people from all over the world came to profit by providing for the fort’s inhabitants. Natives also came to reside within the *vici* because of the new economic opportunities, and the circulation of coins even allowed them to purchase Roman goods.

*Vici* were subject to the forts because their existence depended on the soldier’s needs. The foreigners along with the native population and Romans lived in close proximity to one another causing an intermingling of cultures. Many of the luxuries that Romans enjoyed were now provided for the natives such as bath houses and brothels which were shared within the *vici*. Evidence from these *vici* display that Roman material culture had swiftly manifested itself. The natives were using Roman pottery, eating Roman foods, and living in Roman houses. Romans forcefully took over the land of the Britons, but they did not need to force their culture on the populace. There were no demands that the natives needed act and speak like a Roman.

Yet, this does not mean that Roman culture was not imposed in other ways. To reiterate, Roman forts created a new economic hub in the region. Britons came to the *vici* because they provided new jobs that added an additional income to farming. The natives began to learn Latin in order to communicate with the Romans they were interacting with causing Latin to quickly spread to the upper and lower class in northern Britain (Haverfield 34). Moreover, imports that had never entered the area before became plentiful due to the extensive road system that was laid out by the Roman army. The proximity of Roman goods allowed them to be equally attractive if not more attractive than their native version. Britons may have not adopted these foods and goods with the mindset of becoming Roman but adopted them because of their convenience.
While the Britons adopted Roman pottery, Germans and Gauls did not. Rather, they created larger imitations to fit their own native customs. Similarly, the natives in this context could be seen as integrating Roman goods for their own benefit without adopting the Roman belief system surrounding the objects.

The houses of the *vici* were much different than the roundhouses that Britons, Gauls, and Germans were used to. There was no slow transition in Britain, and rectangular homes began to appear immediately in the *vici*. Extended families were broken apart because of the new housing structure, and natives were introduced to a new urban environment that was much different than their normal rural environment. However, they saw that the sacrifices were justifiable, so they may take advantage of the new economic possibilities or live with their Roman husbands. In Germany, *vici* were similar to native homes during the first century, but they too transitioned to strip housing during the second century suggesting their acceptance of the Roman way of life. The natives, Romans, and foreign traders formed marriages with one another. Children of these marriages were brought up in a household with two different cultures. They would have to adapt to their confusing surroundings, but this first generation acted as the beginning for the people accepting one another.

Roman soldiers within the forts and the inhabitants of the *vici* became the largest consumers in the region. Many of the soldiers were transferred from German forts where cattle was the main source of meat. Thus, cattle were continuously being shipped to the fort in order to feed the soldiers. On the other hand, sheep and goats were the main source of meat for the native population, and they continued to eat this way in rural areas. However, the abundance of cattle
led those in the *vici* to mirror the fort's occupants and cattle also became their main source of meat.

Those who decided to not move to the *vici* were still heavily impacted by the Roman presence. The economic dominance of the forts caused rural populations to change what they were producing. While the north’s arable agriculture could not compete with the south’s production, the indigenous people have been raising animals for centuries and were able to help supply the forts with cattle. The rural area in Britain also retained their cultural building standards, but those in Germany decided to merge their building techniques with the Roman style. The differences between the two regions may have been due to the absence of a native social elite in Britain who would have adopted the Roman style and helped to spread it to the other natives.

Shrines and other dedications started to appear around the forts and the nearby *vici*. These allowed for the people to have a place to give offerings, but there was a large difference between each culture’s religion. Classical Roman gods had shrines in northern Britain, but they were infrequent, emphasizing the lack of enthusiasm from the natives towards the Roman gods. However, some gods did seem to attract the attention of the natives. Mars and Mercury were similar to many Celtic gods, and they began to be merged so that both cultures could praise the same deity. There were even shrines that were erected such as Sulis-Minerva where both Celt and Roman alike gave votive offerings. In the example of Hercules on the Germanic frontier, it was the similarities and relatable mythology that persuaded them to adopt the Roman gods. Romans were able to gradually change Celtic religious practices into Roman ones causing many native beliefs to become Romanized.
The cultural assimilation in these regions changed eating habits, cultural values, and other native customs. Forts and *vici* were the main source of this change causing the frontier in Britain and Germany to transform in similar ways. However, differences do arise that may be due to the appearance of these walls. Hadrian’s Wall across Britain, made of stone and turf, was much more intimidating than the wooden wall of Germany. Thus, the main discrepancy between these two regions may have been the ability of the Romans to placate the native population. Both Britain and Germany were large sources of contention with multiple accounts of battle. The last major rebellion in Britain was when the IX Hispana was wiped out in 122 AD. Following the creation of the Wall, the cycle of rebellion ceased. Similar to the frontier in Britain, Germany was subjected to numerous rebellions. Domitian’s influence was so weak in the region that the Governor of upper Germany, Antonius Saturninus, staged a revolt against the emperor. Rome’s German border remained relatively safe following the creation of the wooden palisade until the initiation of the Marcomannic Wars 166-180 AD.

During this war, the roles were switched and Rome was on the defense. Before the war, the Chatti and Chauchi Germanic tribes invaded Raetia and Germania Superior (HA. Marcus Aurelius Antoninus. VIII). After the initial attack was defended, Rome faced six thousand allied Marcomanni, Langobardi, Obii, and other tribes during the initial invasion of 166-167 AD (Steuer 231). Rome was also being ravaged by the Antonine Plague which killed approximately three and a half to five million people (Littman and Littman 254). The Roman Empire was being invaded across the whole length of the river Danube, and the barbarians managed to invade Italy before Rome finally was able to repel the invaders and sign a peace treaty in 180 AD under the emperor Commodus.
This analysis of the effect of Hadrian’s Wall highlights the strength of Rome through the cultural assimilation of the native population. Rome did not need to exploit the weakness of the natives in order for them to adopt Roman beliefs and customs. Their military might created new stability to the region and caused the cycle of war to cease. Economically, Roman vici and forts permitted the natives to pursue different jobs and enticed them to move to the vici where they were surrounded by Roman luxuries that they could now purchase with Roman coins. Vici allowed the indigenous population to build trade relationships with the Romans compelling them to learn their language and customs. Natives even married Romans allowing both cultures to accept one another. Being enveloped by Roman culture, natives learned about Roman gods that were not too different from their own. They adopted them allowing the native religion to be merged with the Roman religion. The presence of the Romans caused the population to change from “barbarians” to a workforce that lived in Roman homes, produced Roman goods, paid Roman taxes, adopted Roman religion, and spoke the Roman language.
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