

THE PICTURE STONES OF GOTLAND: TYPE C AND D STONES AS DEATH
MEMORIALS

A Thesis

Presented to

The Faculty of the Department
of Comparative Cultural Studies
University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of
Master of Arts

By

Kelsie H. Spears

May, 2016

THE PICTURE STONES OF GOTLAND: TYPE C AND D STONES AS DEATH
MEMORIALS

An Abstract of a Thesis

Presented to

The Faculty of the Department
of Comparative Cultural Studies

University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of

Master of Arts

By

Kelsie H. Spears

May, 2016

ABSTRACT

This thesis focuses on the picture stones of Gotland, Sweden dating to the Viking Age. The Viking Age picture stones are made up of two groups, C and D, as delineated by Sune Lindqvist, dating to 700-1000 AD. Utilizing a basic hypothesis by Björn Varenius, which was applied to Early Iron Age picture stones, a research plan was created and applied to the stones of the Viking Age. An iconographic analysis was performed on six well-known stones found in the Gotland Museum and Swedish National Antiquity Museum. This iconographic analysis used the frequency of individual images and a correlation of images appearing together to interpret the basic thematic meaning of the iconography. A landscape discussion and context analysis was done on three sites, Buttle Änge, Fröjel Stenstugu, and Visne ängar, which had in situ picture stones. The landscape discussion sought to find significant features which could be connected to the stones and interpreted. While the context analysis looked at the archaeological finds excavated from around the immediate vicinity of the stones, and what that proximity could mean based on its location. All three analyses came together to make a determination of what the picture stones of the Viking Age mean and what their purpose was.

Acknowledgements

First and foremost, I would like to thank my dad for allowing me to travel all the way to Gotland, Sweden for three summers so I could fall in love with the island.

Without him I would not have discovered my fascination with Vikings, much less my deep passion for archaeology on Gotland and its' picture stones. Hand in hand with my dad is my mom, who supported me through my wildest endeavors throughout my academic career. She has been there through Greek wars, Egyptian mummies, and a Mayan apocalypse, before I finally found Vikings. Thanks to my brother for being himself, and making me laugh when I was most stressed.

I would like to thank my professors at the University of Houston, Dr. Widmer, Dr. Bentley, Dr. Storey, and Dr. Vaughn for teaching me and expanding my knowledge so that I was able to complete this thesis at the highest level. Thank you for taking a chance on a thesis about some stones in Sweden by a student with entirely too much research in a binder and big ideas.

Thank you to my professors and mentors at Texas A&M University Galveston, without that first spark of interest I had in archaeology while talking to you at the New Student Orientation booth I would not have been on my current path. Y'all offered me so many different paths and interests during my time there, which acted to round me out as a student. Specifically Dr. Mark, Professor Oertling, and Paula Knofla: Thank y'all so much for your teaching and support!

I would also like to thank Per Widerström for the work he gave my group in the form of Visne ängar. My first interest in Gotland archaeology was struck there, tirelessly mapping and measuring house foundations and the in situ picture stones. It is my time

spent at this site, with those specific stones which gave me the idea for this thesis. Thank you for your time spent talking with me about this thesis and for encouraging me to look at the stones in this way.

A big thank you to my friends, Ashli Morse and Lora Hambrick, for putting up with my obsession with Vikings and Gotland. Many a conversation was inadvertently, or purposefully, turned to Gotland and the picture stones, so thank you for being there for me and listening to my rantings, through thick and thin, always and forever.

Thank you to Jerika Jordan for the endless hours you spent editing this thesis. My appreciation for this knows no bounds!

Thank you, also, to the ladies in my cohort, Christina Gwyn and Tina Nguyen. We supported each other, stressed together, worked together, vented together, and so much more during this process of Grad School and thesis writing. I'm so proud of us for all we accomplished!

Thank you to my boyfriend for joining me in my obsession and making it his own through this process! Learning Icelandic runes for fun, watching Viking shows, listening to me blather on and on; you have been my rock while writing this thesis, and I cannot wait to finally show you Gotland.

Thank you to the Gotland Museum for giving me access to the Picture Stone Hall, and Melody "Astro" Douthitt for her photography.

Table of Contents

Abstract of Thesis.....	i
Acknowledgements.....	ii
Table of Contents.....	iv
List of Figures.....	vii
<u>Chapter 1: Introduction</u>	1
Research Problem.....	3
<u>Chapter 2: Background</u>	6
The Viking Age.....	7
Mobility in the Viking Age.....	14
Swedish Rune Stones.....	19
History.....	19
Iconography Analysis.....	21
Inscriptions.....	21
Images.....	24
Landscape.....	24
Gotland History.....	25
Mobility of Gotlanders.....	27
Gotland Picture Stone Research.....	32
Taxonomical Research.....	33
Iconography Research.....	35
<u>Chapter 3: Methodology & Criteria Analysis</u>	40
Database.....	40

SPSS.....	41
Iconography Analysis.....	41
Context Analysis.....	43
Landscape Discussion.....	44
Criteria Analysis.....	45
Stone Criteria.....	46
Iconography Criteria.....	46
Variables.....	47
<u>Chapter 4: Iconography Analysis</u>	57
Descriptions.....	57
Descriptions of Group C Stones.....	57
Descriptions of Group D Stones.....	63
Motif Analysis.....	69
Battle Scene v. Domestic Scene.....	69
Ships.....	72
The Welcome Scene.....	73
A Funerary Procession.....	75
Variable Discussion.....	76
Male v. Female.....	76
Warriors.....	79
Weapons.....	79
The Eagle and Sacrifice.....	80
A Formula for Odin.....	81

Summary.....	82
<u>Chapter 5: Landscape and Context Analysis</u>	85
Buttle änge.....	85
Fröjel Stenstugu.....	88
Visne ängar.....	90
Gotland Analysis.....	93
<u>Chapter 6: Interpretation</u>	98
Iconography Analysis.....	98
Landscape and Context Analysis.....	99
Comparison with the Gotland Picture Stones.....	100
<u>Chapter 7: Conclusion and Implications</u>	103
Implications.....	104
Works Cited.....	106

List of Figures

1.1	Early Iron Age Group B stone, SANDA KYRKA VI	2
1.2	Typology of the Gotland picture stones by Sune Lindqvist.	3
2.1	Map of Scandinavia	8
2.2	Grave mounds at Gamla Uppsala	10
2.3	(Top) Reconstruction of Skuldelev Warships, (Bottom) Reconstruction of Skuldelev Cargo ships	16
2.4	In progress replica of a Viking ship at Roskilde Museum, Denmark	18
2.5	Map of the distribution of runic inscriptions for the Viking Age	20
2.6	Öl 58, Gårby	22
2.7	U 1161, Altuna Church	23
2.8	Map of Gotland showing Visby, the capitol, and Roma, the site of the Gutnathing	26
2.9	Sample of finds from the Spillings Hoard	30
3.1	View of the Picture Stone Hall at the Gotland Museum	45
3.2	Warrior on KLINTE HUNNINGE I	47
3.3	Ship in the bottom panel of LÄRBRO STORA HAMMARS I	48
3.4	Cow from KLINTE HUNNINGE I, also a Domestic Scene example	49
3.5	Top panel of KLINTE HUNNINGE I showing a Battle scene, Valkyrie, and dog	49
3.6	Raven on LÄRBRO TÄNGELGÅRDA I	52
3.7	Odin riding Sleipnir with a Valkyrie on ALSKOG TJÄNGVIDE I	54
3.8	Eagle on LÄRBRO STORA HAMMARS I	55

4.1	KLINTE HUNNINGE I	58
4.2	LÄRBRO STORA HAMMARS I	60
4.3	STENKYRKA SMISS I	62
4.4	ARDRE KYRKA VIII	64
4.5	ALSKOG TJÄNGVIDE I	66
4.6	LÄRBRO TÄNGELGÅRDA I	68
4.7	Welcome Scene on LÄRBRO STORA HAMMARS I	73
4.8	Welcome Scene on ALSKOG TJÄNGVIDE I	74
4.9	Funerary Procession on LÄRBRO TÄNGELGÅRDA I	76
4.10	Male Frequency Chart Overall	78
4.11	Female Frequency Chart Overall	78
4.12	Database Table showing the number of each variable that occurs per stone.	84
4.13	Database Viewer showing the Presence/Absence output for each variable per stone	84
5.1	Buttle änge I and II in situ	85
5.2	Burial mound at Buttle änge	87
5.3	Fröjel Stenstugu stone in situ	88
5.4	Button shaped bronze mount from Fröjel Stenstugu	89
5.5	Visne ängar stones in situ	90
5.6	Map of Stone fragments	91
5.7	Feature Group 4, house foundation	92
5.8	Feature Group 3, grave mound	92
6.1	Group E Gotland rune stone from Sjonhem kyrka	101

Chapter 1: Introduction

What was the purpose of the Gotland picture stones? All over the Swedish island of Gotland the stone monuments, known as the Gotland Picture Stones, are found. Since the first discovery, on August 16, 1632, in Upplund, by Johannes Bureus, there have been antiquarians looking at the Swedish rune stones. The delineation between the Swedish rune stones and the Gotland picture stones came in 1834, but the true beginning of Gotland Picture Stone History began with Sune Lindqvist's monograph *Gotlands Bildsteine*, published in 1941 (Lamm 2011:24-25). In this monograph Lindqvist analyzes the stones shape, iconography, runic text, and locations to provide the world with a comprehensive book about the stones, including a taxonomy which is still used for picture stone organization. Today we have expanded and surpassed Lindqvist, stretching our analyses to the meaning of the stones. Using the various sagas recorded by Snorri Sturluson and others, we are able to use the myths and legends of the Norse to identify scenes on the stones and use their interpretation to read the meaning attached to the stone. Agneta Ney did this in her 2011 article "The Welcoming Scene on Gotlandic Picture Stones, in Comparison with Viking Period and Medieval Literary Sources."

Aside from iconography there is the use and purpose of the stones. "Picture Stones as an Opening to Iron Age Society", an article by Björn Varenus in 2011, examines the stones as a Gotland tradition of death memorials due to the context of early Iron Age stones of Group B at cemeteries (See an example of a Group B stone in Figure 1.1). This article will provide the basis of my hypothesis for this thesis in that the original hypothesis that the early Iron Age stones are death memorials can be applied to those of the Viking Age. The Viking Age is a controversial time in history due to the raids of the

Vikings, however, the archaeology of this time looks beyond that into their world in the North. Gotland is a part of that history and the picture stones are a part of that archaeology. The use of the picture stones is something that has not been thoroughly explored by archaeologists, and is therefore, the issue I wish to explore in this thesis using iconography, landscape, and context as criteria to prove the use of Viking Age picture stones as death memorials.



Figure 1.1 Early Iron Age Group B stone, SANDA KYRKA VI (Photography by Douthitt 2014)

Research Problem

This thesis focuses on the use and purpose of the Gotland picture stones dating to the Viking Age. There are no written historical records explaining the purpose of such stones in a Gotland context, so it comes down to relying on what the archaeology and interpretations of possible meaning of icons and locations at that time can tell and infer. These variables are precisely what this thesis will utilize to explore Viking Age picture stone meaning. The picture stones of the Viking Age have been given the date of 700-1000 AD and are identified as Group C and Group D stones by the picture stone scholars today who utilize a typology by Sune Lindqvist in 1941 (Figure 1.2).

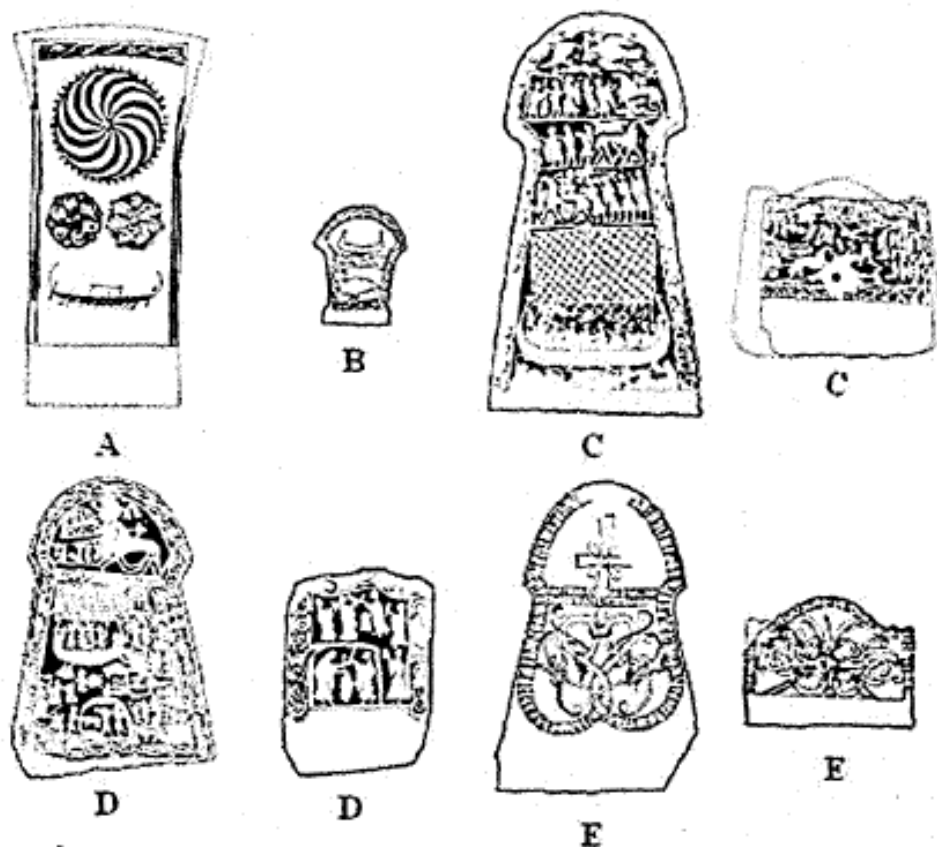


Figure 1.2 Typology of the Gotland picture stones by Sune Lindqvist. After Andreef 2007:251.

In order to explore Viking Age picture stone use and purpose this thesis will employ the hypothesis of Bjorn Varenius. Varenius' hypothesis looks at the picture stones of the Iron Age and their use for death memorials based upon their locations at cemeteries, the context they are found in, i.e. near graves, over graves, etc., and their iconography relating to death through symbols or myths of death (Figure 1.1). Using this basic frame work I will apply this theory to the Viking Age.

Hypothesis 1: The criteria of iconography, landscape, and context all can be relied upon to have the connotation of a relationship with death and mortuary practices.

Hypothesis 2: The Viking Age Gotland picture stones were used as death memorials because of their death related criteria of iconography, physical location/landscape, and archaeological context.

The criteria for testing these hypotheses provide the basis for proving mortuary connections and an expected pattern of identification of use for the stones. That being said, that when they are found near graves and cemeteries, with a context that gives them meaning as significant to that landscape, for example with local ceramics, animal bones, or a grave, and featuring iconography of death, then they were stones used for death memorials. The Viking Age stones I test ought to show this pattern. This hypothesis and subsequent pattern will test the theory of Varenius as to its expansion to other time periods with the stones, and in doing so explore new data in that context.

For this problem I will examine the picture stones of Groups C & D for their iconography, landscape/location of discovery, and context of discovery. Specifically I will look at the following picture stones:

Group C: Klinte Hunninge I, Lärbro Stora Hammars I, Stenkyrka SMISS I

Group D: Ardre kyrka VIII, Alskog Tjängvide I, Lärbro Tängelgårda I

In situ Stones: Buttle Änge, Fröjel Stenstugu, and Visne ängar

These stones are representative of the group typology and in situ stones, and therefore present the best choices for showing the use and purpose of Viking Age stones.

Using the stones listed as Group C and D statistical analysis will give correlations of different images/icons found on the stones. This will be significant because the appearance of certain images with others could give an inference to an important motif or theme, an ideal example being death.

The landscape and context of the picture stones will be examined using the in situ stones listed above. The landscape of a find takes into account the physical position of an object and looks at the natural features around it, like rivers, crossroads, cemeteries, place names which tell of a certain tree, grove, religious place, etc. The context of a find is similar to the landscape, but in these circumstances context refers to the other archaeological items found around the stones, like burials, pottery, food, offerings, etc.

Chapter 2: Background

History itself is an important tool when looking at archaeological and anthropological problems and questions. Understanding what is known about a certain era allows for interpretations to be made about objects, situations, contexts, and landscapes. It also underscores the importance of considering dating when looking at documents and drawing comparisons in meaning. The background required for understanding this thesis is heavily versed in history of both the Viking Age and Gotland itself in order to draw conclusions about the scenes shown on these picture stones. From the political situation found, to the everyday life, to the mobility, to the stone traditions; all of this comes together to offer up a complete picture with its own meanings and understanding which become evident upon further exploration.

This history, however, is mere words in this context without the backing of archaeological finds. The archaeology of the Viking Age provides validation for what is thought to be known about this time period, as well as opens new doors to understanding and giving new insights to the historical record. The archaeological record and historical records can work in tandem to uncover answers, such as those being explored in this thesis.

The first section presents an overview of the Viking Age, from its start and infamy, to its culture and conclusion. This section also offers a focus on the mobility of the Vikings by addressing their unique ships and ship building tradition. This history is followed by a history of Gotland, Sweden, looking as well at the island's culture, myths, and mobility by focusing on the trade and the archaeological evidence of such activities. The focus on mobility is important for this thesis due to the spread of stone traditions

throughout Sweden and the Viking Age, as well as the overall mobility highlighted throughout the Viking Age in their raiding, trade, and travel.

The Viking Age

The Viking Age is a rich period in history where the Norse people gained a reputation which lives on today. 793 AD at the monastery of Lindisfarne, part of Northumbria, marks the beginning of the Viking Age. Lindisfarne was attacked by Vikings and plundered for its' gold in an act that shocked the Christian kingdoms of the area. That was just the beginning of such Viking Raids; they would continue raiding those coastal monasteries for years before beginning a land siege that would color history forever. The raids on the monasteries were tactical ones, in that they knew that places of Christian worship were full of gold in the form of crosses, icons, serving ware, and that these places would be unguarded; the notion of attacking a house of God being sacrilege was not even thought of at that time. These pagan Vikings exposed a culture previously little known outside of Scandinavia. Since then, the first-hand accounts in the *Anglo-Saxon Chronicles* and the *Carolingian Chronicles* have colored the world's view of these blonde marauding giants from the North (Roesdahl 1998).

The reason for raiding activity is relatively unknown, but there are a variety of theories. One such theory is that they were politically driven raids in reaction to Frankish Christian attacks on Denmark/Jutland, but this theory does not hold because the original Viking raids came from Norway and not Denmark (Williams 2012:193). Had it really been a retaliation action then it would be expected for the raids to originate from the injured party of that Christian incursion: Denmark. Early raids into Britain were small, local efforts probably organized by local leaders, but the later raids were large forces who

ended up with possession of lands. This could connote the purpose of raids being for glory and seeking wealth, and later on new lands for new leaders (Williams 2012:194-195).



Figure 2.1 Map of Scandinavia. After Roesdahl 1998.

In an examination of the diaspora of the Viking Age, the demography of their world exposed an additional cause for the explorations into Britain: a surplus of young men. This is not to say that there was a population pressure pushing these young men out of Scandinavia, but that there was a “marriage imperative” at the time (Barrett 2008:676). The women of this time are theorized to have been in limited numbers due to selective female infanticide, and in order to marry these limited women and set up their own households, the men in these raids needed to acquire wealth to fund that life. The raiding activity which started the Viking Age would have been fueled by this demographic problem and economic solution: “it is easy to imagine participation in raiding parties as part of a Scandinavian male’s life cycle in the early Viking Age. On a comparative anthropological canvas perhaps plunder, like short-term urban labour, could *‘provide the cash needed to succeed in the rural context – to accumulate bride-price, provide a dowry, or buy a home’*” (Barrett 2008:676). This cultural coming of age, as it may be seen, defines the laymen knowledge of what is the Viking Age.

Weaponry is a very large part of Viking culture, especially as a society which had a focus on raiding and warfare as Scandinavians during the Viking Age did. Raiding, fighting, working as mercenaries, and defending their acquired lands requires weapons and those main types of weapons for Vikings were swords, axes, bows and arrows, and spears. Some of these weapons would also be required for hunting to supply food for their families.

The Viking sword was made of iron, had a single or a double edge, and had a pommel of iron or copper, although bone, antler, and silver pommels have been found. The decorations, when present, could range from animals to runes to later Christian

symbols (Pederson 2012:204). The presence of a “fuller”, a shallow groove along the middle of the blade, made the Viking swords more pliable and stronger. The Viking axe was also made of iron and was usually plain, although some axes have been found in graves which are decorated with copper and silver. The shape of the Viking axe could vary, along with the size, but the most common forms were light, slender small axes, broad bladed battle axes (like the ones seen in the various Viking shows and movies today, and longer blades and handles (Pederson 2012:206).

Vikings bows are found infrequently in the archaeological record, but those which have been found are made of yewwood and are typically seventy-five inches long. In contrast to the bows, Viking Arrow heads are often found in graves and around Scandinavia. Arrow heads were made of iron and had an iron tang which seated it into the arrow shaft, and the shape would be the typical arrow head, though later the four sectioned arrow head was popular for military use (Pederson 2012:207).



Figure 2.2 Grave Mounds at Gamla Uppsala.
(Photography by Spears 2013)

Viking spears were leaf shaped or angular with a pronounced ridge along the center of the blade. They were typically made of iron, and, were also known to have some engravings and decorations on them. Looking at spear heads which have been found the shafts on which the head was mounted could have been about two meters long (Pederson 2012:206).

The Vikings' religion as a culture feature is a fascinating practice of mysticism and daily rituals, highlighted by elaborate descriptions of specialty rituals like those described by Adam of Bremen at Gamla Uppsala. The sources for Old Norse religion and cosmology/mythology were written down years after the Christianization of Scandinavia. This means that the stories ran the gambit of Medieval Christian culture, and have the potential of being warped by the prejudice held against Pagans and paganism (Hultgård 2008:212). A good example of this is Adam of Bremen when he tells of the large temple at Uppsala which featured Thor seated between Odin and Freyr, where pagan sacrifices were performed:

“...of every living thing that is male, they offer nine heads with the blood of which it is customary to placate gods of this sort. The bodies they hang in the sacred grove that adjoins the temple. Now this grove is so sacred in the eyes of the heathen that each and every tree in it is believed divine because of the death or putrefaction of the victims. Even dogs and horses hang there with men. A Christian told me that he had seen 72 bodies suspended promiscuously” (Bremen 2002).

This sacrifice at Gamla Uppsala is, and has been, the topic of many an archaeological investigation. During these investigations they have found, within the large mounds there

(Figure 2.2), burials of three Swedish kings which have been identified along with remains of what is thought to be the temple Bremen spoke of. All Viking rituals were not of this nature, but this is the type of ritual made infamous to the Viking Age and their religious culture, assuming even part of this account is accurate and not dramatized. It is more likely that the account is highly dramatized, but as a primary resource it has driven archaeological investigation. A problem with looking at the written sources in regards to this thesis is that these sources are not only from years after Christianization, but that they were written in Norway and Iceland, not Sweden.

The class structure of the Vikings was hierarchical, with many kings as the leader of the sub-areas in his area, and each sub-area had a *jarl*, similar to chief, then the jarl had *karls*. *Karls* were warriors in the army or navy. There was no one king of a large kingdom, like Sweden, Norway, and Denmark, until the conversion of Scandinavia to Christianity, so during most of the Viking Age there were many king controlling a variety of areas all competing for power and territory. The rest of the people in an area were free peasants or slaves, called *thralls*. These slaves often had a role in the burial of their masters or mistresses; in that they would have been sacrificed/killed and then buried alongside their masters. A large number of burials have been found with a male or female with fine burial goods, like jewelry, lying beside another body. A female thrall's body if the wealthier individual was male, and a male thrall's body if the wealthier individual was female. These thralls would have been killed in a violent way, like the decapitated thrall in a Stengade, Denmark double burial (Roesdahl 1998:54). Overall, the social structure of the Vikings was kin based, meaning that those in the same family, kin group, settled together on farmsteads with other kin groups in a large area. The government

structure they had featured meetings at “Things”, circular meeting places where men would gather and discuss issues, the coming raids, punishments, etc. Each area had a thing and then there was an “All-Thing” where the heads of all the Things would gather. It is unknown who would head the Thing, but it is thought perhaps the jarl or king would head the meeting (Brink 2012:24-26).

Everyday life as a Viking would be dominated by agriculture, hunting, and fishing in their respective areas. Longhouses were the dwellings for the people, which were long houses with three sets of supports and a thatched roof which housed multiple families. Another occupational activity which dominated Viking life was trade. Vikings are known to have reached incredible distances with their longboats and various ships and the importance of those ships is documented by a majority of material artifacts. Vikings reached Britain, Russia, North America, the Rhine area, and Islamic areas for trade and colonization, and raiding of course. This trade can be seen in the variety of coins found in hoards throughout the Viking area. The Spillings Hoard of Gotland features proof of these trades through the coins found in it from Islamic countries, England, and Germany (Östergren 2009:12).

The end of the Viking Age is commonly identified as the Battle of Stamford Bridge in 1066 where King Haraldr Harðráði and his army of Northmen, common English term for Vikings as they are men from the North, were defeated by the English King Harald. After this no Vikings raided or caused much trouble for England, and that cessation of action against them is what marks the end of that time period (Brink 2012:5). This was also the time of the conversion of Scandinavia to Christianity, which also

precipitated the formation of real kingdoms that would later become the countries we know today.

Mobility of the Viking Age

The Vikings were a culture of people made highly mobilized by their long standing tradition of ship building. In order for a people such as the Vikings to be mobilized they needed to have a solid ship building tradition, and it is this tradition which enabled the Vikings to have the history they do today. The landscape of Scandinavia maintains a high volume of large trees, like ash, oaks, etc., which are ideal for the construction of water craft (Bill 2008:170, Roesdahl 1998:85). The style and technique used in building these ships is what makes the vessels unique to this culture and vastly important in understanding the mobility of those who sailed them. This culture was surrounded by not only the means with which to build these vessels, but also a vast amount of waterways to be traveled, and because of this a high quality tradition of shipbuilding was born and expanded on, beginning several centuries before the Viking Age.

Ships of the Viking Age are commonly known by a coverall term “longboats” or “longships”. The longboat was a long narrow vessel propelled by sail and rowers, which was designed to be versatile in shallow as well as deeper waters. It was this versatility which made the Vikings such a threat when they began infiltrating other lands. The parts of these ships have been known thanks to archaeological finds of ship burials, as well as nautical archaeology finds of sunk vessels, like those at Roskilde.

There were two different types of Viking ships: Warship and knörr. The warship was made to travel long distances, like most Viking ships, but it also would have been

made to move at high speeds. As a result, the construction of a warship would have been light weight, which can be seen in Figure 2.3. The parts of the ship would have been made thinner, more delicately, so as to allow for more speeds. They also featured rowers and sail; the rowers were useful in getting the ship quickly to shore to attack an unsuspecting foe, while the sail would have been for open waters traveling to the site of such an attack (Bill 2008:170-172).

The need for these two types of ships lay with the economic situation brought on by the Viking Age. With the increased frequency of contact between Europe and Asia came the need for vessels which were able to carry large amounts of cargo from trade and pillaging: the Viking knörr. According to Dr. Jan Bill, former Head of Research at the Roskilde Museum in Denmark: “What marked out these was that they could be sailed by a small crew, that they had a large loading capacity per crewmember and that they were dependent on the sail for propulsion.” (Bill 2008:176). The cargo ships were longer and broader than the Warships, and made from heavier materials so that they would be sturdy for long voyages rather than versatile and brisk like the warships.

A typical Viking longboat would feature a square rigged sail with a mast at midship, held in place by wooden pieces called the mast key and keelson, these pieces helped to support the mast when the sail was out (Crumlin 1997:90). Viking ships were “clinker built with over-lapping planks fastened with iron rivets or with wooden pegs..., and made watertight with a luting of hair or moss” (Crumlin 1997:113). Clinker built, or lap-strake, constructed ships were built shell first, meaning the hull was built first then frames were nailed to the inside of the ship. The luting most commonly used for these ships would have been made from sheep wool, twisted into a rope, and dipped in tar to

aid in waterproofing when it was tucked into the spaces between the planks (Crumlin 1997:85-86).

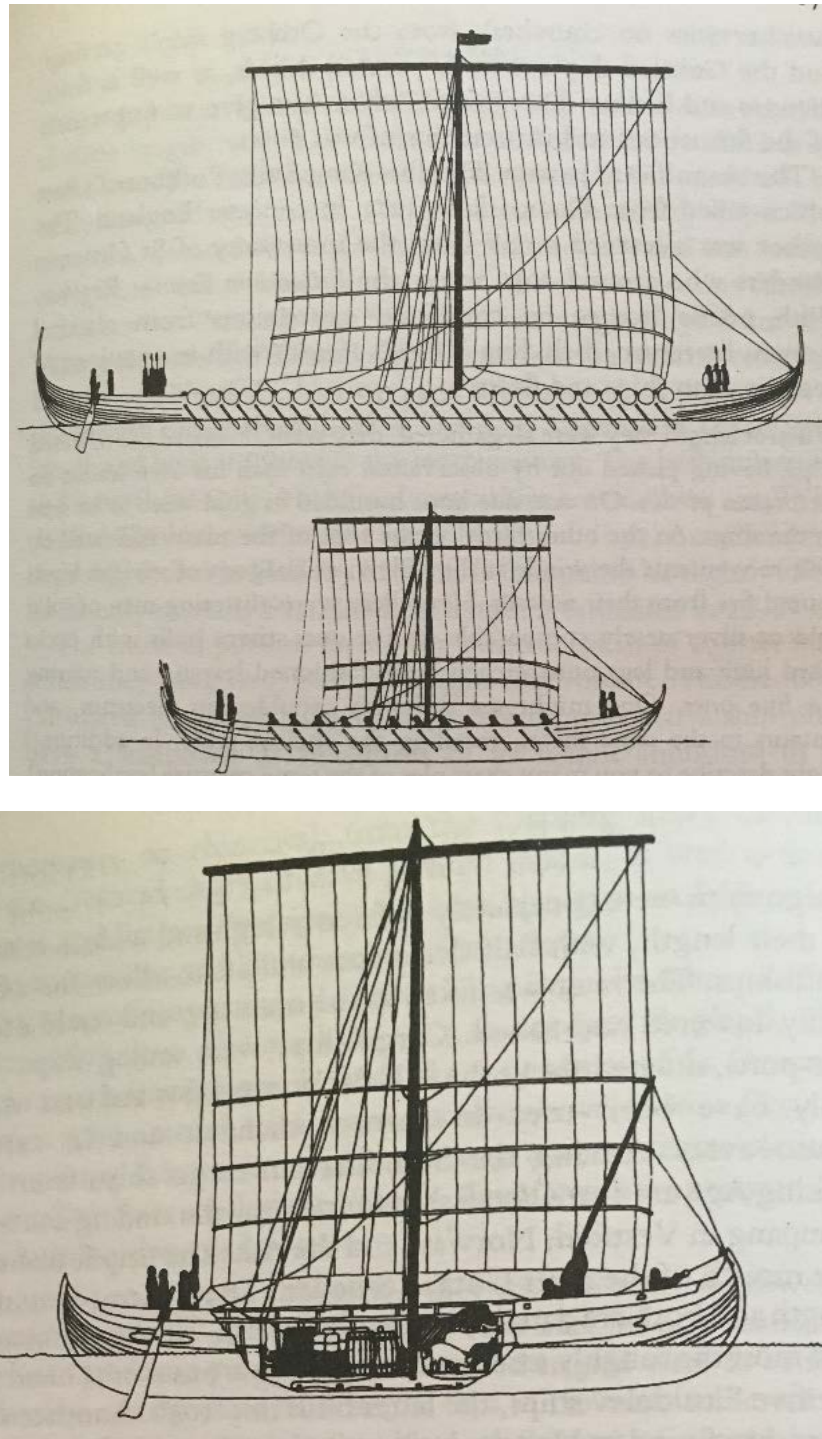


Figure 2.3 (Top) A reconstruction of the Skuldelev Warships, Denmark. (Bottom) A reconstruction of Skuldelev cargo ships, Denmark. After Roesdahl 1998:87.

The method of propulsion for these vessels was key. They were equipped with a square rigged sail for wind propulsion, but also with oarlocks and oars for manual propulsion. This meant that over long distances, when manual propulsion was not the best choice for long distances, the sail could be set and wind power harnessed. The manual propulsion would be exceedingly useful when short, swift bursts of speed were needed, like when charging up to a coast, or when controlled speed was essential when navigating rivers or tricky coasts (Crumlin 1997:92,126).

The vast amount of knowledge about Viking vessels comes from written sources, but mainly from archaeological excavations of ships in the water or as ship burials, and also through experimental archaeology. The Roskilde Viking Ship Museum in Denmark is a unique museum which reconstructs Viking vessels using the accumulated knowledge from excavations, like the in progress ship seen in Figure 2.4. The resulting ships give more than just a replica, they also give insight into the importance of these vessels. The amount of resources, time, and man power required to build just one vessel of any type is extraordinary. Dr. Jan Bill gives a discussion on experimental archaeology as having “...shown that building a 30 m longship may have taken as much as 40,000 working hours, including production of iron, ropes, and sails... Assuming a twelve-hour work day and a surplus production rate of 10 percent. This means that to build such a ship should command the surplus production of 100 persons for one year.” (Bill 2008:170). This is a massive amount of time and man power, especially considering that men would be leaving to take these ships out to sea, decreasing the available work force for the construction of more vessels. An additional complication is that little to no work would have been feasible during the short days in the winter. Scandinavia is way up in the north,

as a result during the winter they get few hours of sunlight during the day with which to do work outside. This expenditure of time and resources portrays the importance of these ships for livelihood. The ships are also important because their presence assisted with the ease of communication which resulted in the various political formations seen at this time.



Figure 2.4 Figure 2.4 In progress replica of a Viking ship at Roskilde Museum, Denmark (Photography by Spears 2013)

Through the Europeanization of Scandinavia the desire to unite nations into a solid kingdom became more important. Sweden emerged from a conglomeration of chiefdoms later than Norway and Denmark. This is due to the difficulty Kings had in controlling both Svealand, mainland Sweden, and Götaland, the southern tip of Sweden and the islands of Gotland and Öland. They often would hold one large area and never quite get a strong hold on the other. Christianization brought in papal controls and

bishops who were given areas of Scandinavia to control for the Pope, and this ecclesiastical organization contributed to regional developments. That papal control is also what gave the Kings of Sweden their domain. “In 1164, when the archbishopric of Uppsala was founded, the king of Sweden was addressed by the pope as king of the *Svear* and the *Götar*” (Lindkvist 2008:671). This title was used in its entirety for the first time by King Knut Eriksson of Sweden in 1173-95. Even after Sweden was brought together under one kingdom it remained a “confederate kingdom, consisting of different provinces” (Lindkvist 2008:669). Provinces such as Gotland maintained their autonomy to a point even into the thirteenth century according to the *Gutasaga* (Lindkvist 2008:672). It is this regional autonomy which has made Gotland such a unique entity throughout history with its development of regional traditions like the Gotland picture stones.

Swedish Rune Stones

To understand the full breadth of the originality of the Gotland picture stones from the Viking Age, a look at other stone traditions of Sweden is useful. The Rune stones of Sweden are large stones which contain runic inscriptions on their surface, sometimes with images. Looking at the same aspects of these stones, iconography, landscape, and context, as I did with the Gotland picture stones will clearly illuminate the differences between the stone traditions, but also some expected similarities.

History

In the whole of Scandinavia there are over 3,000 stones with runic inscriptions, with a wide distribution seen in Figure 2.5. For such a large number one would expect a spread over a large period of time, but in fact, the majority of the stones were created in

the tenth and eleventh centuries AD in the Late Viking Age. Some stones found with runic carvings were laid down as a grave covering, but those stones which are known traditionally as rune stones are those which are found in an upright, erect position. The stones from Norway and Denmark were typically very simple with runic script in rows or bands on the stones, while those found in Sweden are much more ornate with the script inside the twisting body of a snake or dragon or other ornamentation (Sawyer 2000:7). The dating of the rune stones can be broken up into two sets of lettering types: Elder Futhark, a 24 character rune series, and Younger Futhark, a simplified 16 character runic series. The Elder Futhark stones date to 400-800 AD, while the Younger Futhark stones occur through the twelfth century AD in Sweden (Sawyer 2000:7-10).

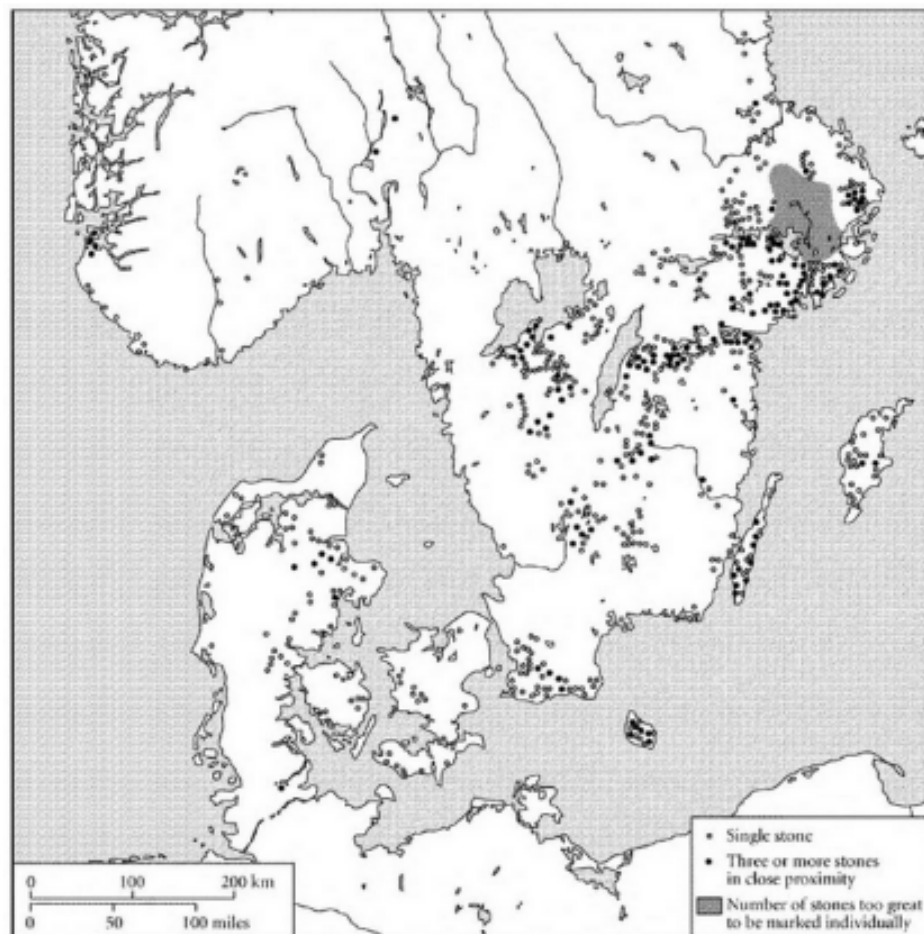


Figure 2.5 Map of the distribution of runic inscriptions for the Viking Age.
After Sawyer 2000:12.

The tradition of erecting rune stones began in Denmark, despite the Elder Ruthark runes not occurring there because “the custom spread from the north and reached what is now southern Sweden by the seventh century” (Sawyer 2000:8). The stone that started this stone tradition was the Jelling stone raised by Harold Bluetooth of Denmark to commemorate and memorialize the country’s shift to Christianity as well as his parents’ deaths (Sawyer 1993:14-15).

There is a vast amount of research done on these stones, mainly in the translation and linguistic interpretations of the stones. As a result, I will utilize a profound study done by Birgit Sawyer, a prolific rune stone historian, as well as a handful of articles which offer up an overview of current scholarship.

Iconography Analysis

Of the more than 3,000 rune stones found, 2,307 of them contain inscriptions of a memorial nature, with 2,057 of those found in Sweden which are the stones I will focus on (Sawyer 2000:11). The vast majority of rune stones which have been erected during the Viking Age have these inscriptions memorializing the death of an individual, typically male. Some of these memorial stones include inscriptions for men who left and died abroad during raids (Jansson 1987:38). It is these stones which have the most research done on them, for the simple reason of their connection with Viking raiding activity being one which draws the attention of most historians.

Inscriptions

The more numerous inscriptions on the Swedish rune stones are memorial stones which contain information in a basic pattern: “X raised this stone in memory of Y” (Sawyer 2000:10). This is a very basic pattern from the majority of stones, and other

stones have been found to be even more specific giving the relationship between the stones sponsor and the dead (Figure 2.6), their social status, military achievements, voyages, cause of death, where they died, etc., ending with the name of the carver (Sawyer 1993:11). Swedish stones also have another even more interesting feature in their inscriptions: Christian prayers and crosses.



Figure 2.6 Ö1 58, Gårby. The commemoration records that the deceased's heir is living abroad.
After Sawyer 2000:121.

The conversion of Sweden took longer than the conversion of the other Scandinavian countries. The reason for this is thought to be the lack of royal authority there. Sweden was not unified until late, comparatively, and therefore did not have a King to announce such a conversion of a whole country like in Denmark. Uppland, the overall area of the pagan ritual site Gamla Uppsala, is the location of almost half of the Swedish rune stones, and the stone inscriptions which are found there have been raised by individuals or families stating their conversion to Christianity. This perhaps was done

to honor their deceased, pagan ancestor in the newly acquired Christian way, by praying for their soul.

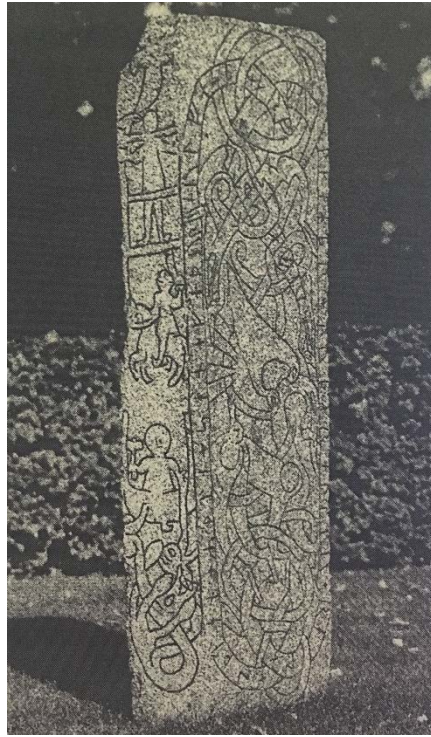


Figure 2.7 U 1161, Altuna Church. Images interpreted as Thor fishing for the Midgard serpent. Inscription: Vifast, Folkad, kúpar had this stone raised in memory of their father Holmfast (and of their brother) Arnfast. Father and son were both burnt in. And Balle and Frösten, Livsten's retainers (carved). After Sawyer 2000:127.

Another style of inscription which is found often is one which declares inheritance rights by way of emphasis on who raised the stone for the deceased. Birgit Sawyer makes a clear claim that she believes “almost *all* inscriptions reflect inheritance and property rights” (Sawyer 2000:47). She supports this claim through discussion of the limited space found on the surface of a stone face, so what was carved upon it was done with meaning and purpose. The example given is a stone which states “Otrygg and Bonde and Alvrik raised this stone in memory of Kåre, their father, and Gunned in memory of her husband. God help his spirit. Torbjörn carved the runes. (U 37, Säby)” (Sawyer 2000:47). The inscription pattern always includes who erected the stone, and often their relationship/s with the deceased. This was done intentionally, and that connection was

deemed a necessity for this stone, as seen in the inscription of Figure 2.7. This is because the sponsors of the stone needed to delineate his relationship which entitled him to a certain part of an inheritance. Although, there are instances of stones being raised by living males for themselves, either in praise of themselves or mentioning what exactly they own (Sawyer 2000:96).

Images

The motifs of the stones follow a similar pattern of a winding, twisted band containing runes which is some animal, like a snake, lion, dragon, etc., a heart, or a cross. The stones also can feature images on them, rough line drawings of males on horseback, males in boats, and males fighting with swords, like found on U1161 (Sawyer 2000:127). This stone has also been interpreted as featuring the god Thor fishing for the Midgard serpent, as is told in one of the sagas. Rune stones with images of lions upon them have been found in the area west of Sigtuna, the medieval capitol of Sweden, which has been interpreted as a sign of royal power (Sawyer 1993:16). Similarly, rune stones with crosses on them, typically correspond with inscriptions of conversion.

Landscape

The physical location of the rune stones varies. One prominent type of location is beside a road or bridge. Many such stones have inscriptions stating that someone had the stone raised for their deceased and then they built this bridge, where the stone is located. This could be an example of good works done in the name of the dead for the sake of social status (Sawyer 2000:93). This same emphasis of status can be seen when rune stones are raised close to burial mounds or ship settings, which date to the Bronze Age in Scandinavia (1700-500 BC) (Skoglund 2008). The shared location of the late monuments

at the site of the earlier ones shows a higher status of the people raising the rune stone because of the high status of such a prominent monument in the landscape.

One of the other more common places to find picture stones was at a farmstead. This would have been done in conjunction with an inscription denoting the inheritance rights of the stone sponsor for the property of the deceased. This also would have been done to answer “emotional needs among the newly converted who, having buried their relatives in new ways and new places, that is in churchyards, wanted to honor them in traditional places...” (Sawyer 2000:17-18). It would make sense for this location to also be considered a response by new converts transitioning from traditional pagan rituals to Christianity.

Related to this challenge for these former pagans of burying the dead in a church yard, is the finding of rune stones in those churches as part of the building. They are not placed in just a corner of the church, however, they are set in prominent places. For example, Uppsala Cathedral features several large stones as supports for prominent columns (Sawyer 2000:14).

Gotland History

Gotland has always been distinct compared to its’ mainland neighbor, and now owner, Sweden. Its’ history, laws, and picture stones all make up part of its distinctiveness. The pre-Viking history of Gotland, has been recorded in what is called the *Guta Saga*, ie the saga of the Gutes, another name for the Gotlanders. In this saga, the myth of Hafdi, his wife, White Star, and her three serpent sons were the first inhabitants, with the sons the first subsequent rulers of Gotland. The saga also describes the Gutes’

belief in sacred groves and grave mounds to the heathen Gods of the Norse (Sjöswärd 2012).

The sanctity of sacrifice and the presence of Things is another mainland Norse commonality which the *Guta Saga* discusses. Dr. Anders Hultgård, a professor Emeritus of History of Religion at Uppsala University, says: “The *Guta* saga reports that local communities used to have worship with animal sacrifices, food, and beer which was known as the ritual of the ‘cooking friends since they all cooked together’” (Hultgård 2008:216). These sacrifices of old were not tolerated in the twelfth century when the *Guta lag* was written, however, as there is a law written in the *Guta lag* mentioning that the punishment for such pagan sacrifices is a fine paid to the church (Hultgård 2008:216).



Figure 2.8 Map of Gotland showing Visby, the capitol, and Roma, the site of the Gutnalthing. After Myrberg 2008:134.

The presence of Things on Gotland has been proven at the site of Roma, seen in the map of Figure 2.8, the accepted site for the Gutnalthing, or the Thing for all the Gutes. *Guta Lag* also discusses the meetings of the Thing and the other various laws of the Gutes, punishments for a variety of crimes, laws concerning inheritance, tithes to the

church, the rights of women, and much more. *Guta Saga* also describes the conversion of Gotland to Christianity as rocky, with the burning of the first church built (known now as Kulstade, or charcoal place). As well as, the acceptance of the church named Stenkyrka, stone church, a place where a vast number of picture stones have been found utilized in the walls and floors of the church, some dating to the Iron Age and some to the Viking Age (Peel 1999).

Gotland during the Viking Age is colored with the findings of silver and bronze hoards all over the island. These time capsules tell much of the distances reached by those of the island in their successful trade. As an island trade would be a necessity for the people living there. Therefore it is no surprise to see the wealth of iconography regarding ships on material items found and picture stones. The presence of these hoards with coins and jewelry from all over is also not a surprise, if you consider the culture of island people in general and the importance of trade. (Westholm 2009:126-127). Some people of Gotland lived agricultural lives on farms, while others specialized in crafts such as metalworking. Farming has been a way of life throughout the history of Gotland and their metalworking is found in Viking Age graves and hoards all over the island (Carlsson 2009:103). One of Gotland's roles within the sphere of the Viking Age takes place in the east with their explorations in trade in Russia, Byzantium, and Eastern Europe. The beginning of trade starts on the home front, with the creation of harbors in which to supply, deploy, and receive ships.

Mobility on Gotland

The mobility of the Gotlanders as island dwellers makes sea life an obvious path. While they would have used the same ships as discussed in the Viking Mobility section

what is more important and distinctive for Gotland mobility is the extent of their reach in the world. Starting with Scandinavia and moving out, the Northmen were a ruthless seafaring people in their raiding activities, particularly in the British Isles. One characteristic they also had was that they were prolific traders. Their trade activities can be traced throughout history and prehistory in the form of goods, slaves, and raw materials, and this trade continued in the Viking Age. Of particular importance when dealing with maritime cultures is looking at the islands which help support this vast amount of trade. Gotland is a small, yet bustling island that has served as a crossroads in the Baltic Sea for hundreds of years. Traditionally, Gotland spurned the exotic goods brought in, largely in favor of raw materials or items which could be melted down or adapted to be like their own local items. The best examples of this trade can be seen in the harbor site of Paviken and its' archaeological findings, and the Spillings hoard for the foreign objects found buried.

Locating sites which were once used for harbors can be a tricky business. The landscape is forever changing, especially for an island such as Gotland with its protected bays, rauk (rock) formations, and ever changing coastline. In order to properly identify this type of site it is necessary to have archaeological excavations and utilize both landscape archaeological techniques, as well as historical accounts/local legends of the suspected areas. According to Dr. Kristin Ilves, an Estonian archaeologist: "In order to discover landing sites in the maritime cultural landscape, a method based on identifying several material and non-material indicators of maritime presence has been designed and used with minor additions/variations in different geographical regions. With traces of human activity discovered, often only in the form of high phosphate values and/or dark

soil, the located sites on the former coasts are functionally interpreted as landing sites” (Ilves 2009:150). This early methodology uses scientific analysis to identify harbors along the Baltic coast. Later, Dan Carlsson, an archaeologist with Gotland University, developed his theory that landing sites could be identified through “the topography of the coast, the situation in the cultural landscape as seen in older cartographic material and prehistoric graves or cemeteries close to the coast” (Ilves 2009:158). Once this process has been done, archaeologists can go in and perform excavations to corroborate and expand their understanding.

The harbor site of Paviken, in the parish of Västergarn, is located on the west side of Gotland south of Visby, the capital of Gotland. Paviken was first identified as a harbor in the 1960s by Hans Hansson who found high levels of phosphate in the area, levels which are indicative of human activity. These phosphate levels were then mapped by later archaeologists to find a workable area for excavation. Hansson also found evidence of human activity, noting that “occupation layers from the Viking period belong to a ship building facility and a landing place at the natural harbour of Paviken.” (Carlsson 2013:3). Excavations of the 1960s-1970s verified those initial findings and delineated areas of shipbuilding, crafts, and trade.

During the excavation done in the 60s and 70s, a variety of weights at the site were discovered. There were ball shaped weights of iron, Cubo-octaedric weights of bronze, and leaden weights of a variety of shapes and sizes. Weights are a commonly used device in trade. Merchants and buyers could tell how much something could be worth utilizing those weights when working out a transaction. Weights in asset such as these are not typically found in an area that did not feature some type of trade. Thus, the

presence of sets of weights in an area suspected of being a trading site highly indicates that the area in question would have trade. That there were three different types and 40 weights found suggests that not only was trade done in the area, but that participants were from different areas. If they had been all local traders, then one type would have been found, not three distinct ones (Sperber 1989:129).

The most recent excavations at Paviken have turned up a number of house structures, one of which was connected with ship activities due to metal and wood deposits. When weighing this evidence together, the original interpretation of Paviken as a site for trade is fully supported. The nature of that trade can be expanded upon, however. Local trade is obvious in the presence of food stuffs like fish and meat, but the weights which were found extend the reach of Paviken and begin proving the reach of Gotland.



Figure 2.9 Sample of the finds from the Spillings Hoard. After Östergren 2009:37.

The working definition of a hoard is “one that contains one or several large objects of precious metal, or at least five coins, which have been stashed away in one and the same place selected by the owner” (Östergren 2009:11). These hoards can be dated using the coins which have been taken out of circulation by being buried, and the date range of Gotland’s hoards are 800-1140 AD. During the eleventh century hoards became fewer but much larger, indicating a few elites primarily controlling the wealth. The Spillings hoard is the most prolific hoard of this time period, and the largest in the world. This hoard was found on the farm of Spillings in Othem Parish, on the northeast side of the island about one and a half kilometers from the coastline. The hoard, the contents of which can be seen in Figure 2.9, is silver and bronze, consisting of 486 bangles, 14,300 coins, 88% of which were in pieces, while the bronze was corroded together into a large cake weighing 20 kilos and buried inside a wooden chest (Östergren 2009:32). The bronze objects found within the cake of bronze materials in the hoard included broken necklaces, bracelets, pins, finger rings, and drinking horn mounts. These objects span 200-300 years and come from Estonia, Lithuania, Latvia, and even Russia. Of particular interest to trade are the coins.

Coins tell the main story of a hoard, because they tell where they are from and where the collector has been. The coins in Spillings hoard are from Hedeby, dating to 825, Byzantium, dating to the 830’s, Persia, with the earliest coin dating to 539 AD and the latest 870 AD, and the rest are of Islamic origin. There are a few interesting coins in the hoard, one of which is the so called “Moses” coin, bearing the inscription “*Musa rasul Allah*”. This translates to mean “Moses is God’s messenger”. The other interesting coins are coins which are illegal imitations from Baghdad. All of these places are known

trading areas for the Gotlanders, who are in fact, prolific here (Östergren 2009:30).

Starting with Hedeby, there is expansive evidence for Gotland trade with this Jutland port center due to its being the most significant center for Denmark at the time. Gotland's trade with Byzantium and Persia would have taken place via the river systems which led to and through those areas. From the Baltic Sea they would have taken the Daugava River to the Dnieper Rivers and into the Black Sea to trade.

Discussion on the mobility through trade on Gotland is relevant not only because Gotland is an island and this mobility is key to its continued existence, but because it offers an understanding of the cultural originality found combined with the commonalities of mainland Scandinavia. For example, Old Norse has local variations due to the isolation of the area and the various chiefdoms. This variation is present in Gotland's runes on later rune stones. Even today when the language is unified, there remains local dialects, like Gotland's Gutnish dialect of Swedish. This thesis works with the example of the picture stones as a shared yet unique stone tradition. Carved stone monuments are found all over Scandinavia in different forms, but those found on Gotland are the most diverse. Other monuments feature runic inscriptions, and later on images like the Jesus figure on the Jelling Stone in Denmark, but none of the stones have the rich imagery seen on Gotland.

The Gotland Picture Stone Research

The research into the Gotland picture stones began with Gotland native brothers Carl and Pehr Arvid Sävö, with their various personal correspondence about the stones as well as P.A. Sävö's article on the topic of the Alskog Tjängvide stone published in an antiquarian journal in 1845. P.A. Sävö founded the Gotland Museum and started their

extensive collection of stones, which can be seen today, and has been impressively expanded on. The next wave of scholars included two men who were also native to the island and started their research with the support of the Royal Academy of Letters. Fredrik Nordin and Gabriel Gustafson began their work compiling research, photos, and drawings of the stones on Gotland with the later assistance of Olof Sörling. Their work progressed to the point of editing before Gustafson died in 1915 and the grant from the Academy passed to the now legendary Sune Lindqvist (Lamm 2011:25-30).

Taxonomical Research

Lindqvist inherited the research done by Gustafson, Nordin, and Sörling and after 15 years of work completed the monograph known as *Gotlands Bildsteine*. This monograph of the stones covers the taxonomy he created for the stones based upon their shapes and iconography, as well as, the work he did in delineating the iconography on the stones. The taxonomy created by Lindqvist divides the stones into five main groups labeled by the Letters A-E. Group A consists of the axe-head shaped stones which contain primitive carvings of men, horses, serpents, ships, and spiral whirls. These stones date to 400-500 AD and range from at least one meter high to dwarf stones which are 0.75 meters high. Group B is a coverall group for what Lindqvist called dwarf stones. These stones are similar in shape to the Group A stones and can also have the shape of the Groups C and D stones later on. They feature rudimentary ships and birds and date to 500-600 AD. Group C are the stones most well known in the shape of a keyhole, also referred to as mushroom or phallic shaped. These stones feature elaborate carvings on multiple panels, typically, with a sailed vessel in the bottom panel and mythological scenes featuring Odin, horsemen, Valkyries, small ships with men aboard, and various

animals in the other panels. Dating to the beginning of 700 AD, these stones stand can be one to two meters tall or more. Group D stones were the same basic shape as the Group C stones, but the imagery on them is cluttered and they are smaller in, with a date of late 700 AD. The Group E stones are also of the same shape as the C and D stones, however, their imagery is reflective of Celtic knots and feature runic writings on them. These stones date to 1000 AD. Using various light techniques to bring forth the images on the stones from their relief shadows, Lindqvist painted the stones with water soluble paint to show the images. What we see now on the stones is the product of Lindqvist's work (Lamm 2011:25-30, Lindqvist 1941).

In the more recent years comes the 1978 work of Erik Nylén and Jan Peder Lamm with their book *Bildstenar* (known in English as *Stones, Ships and Symbols*), which is a work that is meant to be easy to read and includes a catalogue of all the Gotland picture stones. This book has since been released in Swedish, English, French, German, and Japanese with the Swedish version in its' third edition. Nylén and Lamm have done countless articles and excavations on Gotland, and a great deal of their work is on the picture stones of Gotland. The current leaders of picture stone research are Per Widerström and Johan Norderäng. Widerström, the head archaeologists for the Gotland Museum, has worked with Norderäng to expand the catalogue of stones at an increase of 95% since Lindqvist's monograph (Lamm 2011:25-30).

In addition to adding to the catalogue of stones scholars have extended the dating of the taxonomy of Lindqvist to the following: Group A- 100 through 600 AD, Group B- 200 through 1000 AD, Group C- 700 through 1000 AD, Group D- 700 through 1000 AD, and Group E- 1000 through 1100 AD. Nylén and Lamm did work clarifying the

taxonomy in simplified terms for the laymen readers of their work. “The stones have divided into three groups, T, H. M, and S. The T understood the early monuments belonging 400-500's. H. M is an intermediate group whose stones are quite small and often artistically less stringent belongs in the big time 500-700. Group S is a late group from the time about 700-1100. The stones tend to form split shampinjoner and often have a rich narrative pictorial content ‘. (Nylén a Lamb 1987 p 178.)” (Måhl 1990:16). A common strain of research for the archaeologists of the stones is concerned with dating, as discussed above and the iconography featured on the stones.

Iconography Research

Anders Andrén took on the spiral whirl icons of the Iron Age Group A stones, interpreting them as being representations of the sun and the boats beneath them as being “day ships” carrying the sun across the sky (Andrén 2011). Lisbeth Imer worked with the Group C and D stones in her article looking at the stones of the Viking Age. Later stones also give information as to weapon types, clothing, and ships. In her article “A Man’s World. The Imagery of Group C and D Picture Stones” Michaela Helmbrecht looks at the details of the human images presented on various stones from the two groupings and draws conclusions as to the “ideal” man for the Vikings. Using text from the sagas she analyzes the imagery of the stones for common features to give a pattern for the idea of what a man should be for the Vikings. She also uses the same factors to make conclusions about women and their roles as well (Helmbrecht 2011: 84-85).

A different twist on the research of iconography is the use of new materials and techniques to see the images on the stones. Sigmund Oehrl does this using macro-photography and 3-D scanning. With the new or updated techniques, the details

previously unseen, and unable to be seen, can literally be brought to light, deepening the understanding and rich iconography of the stones. For example, as discussed later, the presence of a woman facing a man offering a drinking horn has been interpreted as a Valkyrie welcoming a warrior to Valhalla. Well, on FRÖJEL BOTTARVE that image was not seen until Alexander Andreef did a more detailed analysis and found that the lone woman originally depicted, was facing a man and supported by a swan, a connection to the sagas and a motif much argued by scholars for its validity. In using modern technology the use of a much argued motif was brought to light (Oehrl 2011:91-93).

Another alley of research which has yet to be explored forms the basis of the current study: the purpose and use of the stones. Their function in the culture of Gotlanders has been limitedly looked at by scholars. The scholars who have looked at this issue include: Sune Lindqvist, Karl G. Måhl, Anders Andrén, and Björn Varenius. These scholars have done more than just offer a passing mention as to their use, they have formulated theories of use. Lindqvist focuses on the use of the early stones in that they are found most often in context at graves and cemeteries. Karl Måhl looks at the past archaeology for the stones found in place and tries to identify their function utilizing their context within a site. This shortage of research into the use of the stones in general, as well as time periods besides the Iron Age, is a hole which needs to be filled in the body of picture stone knowledge, which leads me to my specific problem of what the stones were used for during the Viking Age.

Viking Age picture stones consist of Groups C, D, and E stones with their standard key-hole shape and plentiful iconography, making the stones of the Viking Age the era of stones most often studied. Starting at the beginning, Lindqvist wrote

expansively on these three groups of stones and focused a lot of his work on showing their iconography. Similarly, Guðmundsdóttir, Ney, and Helmbrecht have also focused their research on the stones of this time period.

To understand the iconography of these groups of picture stones it is important to have a knowledge of the various sagas of the Norse culture. Those sagas include Snorri Sturluson's *Prose Edda*, *Poetic Edda*, and *Elder Edda*. While the *Poetic* and the *Elder Edda* contain mostly the same stories, there are a few additions to one or the other that make them both of value. *The Prose Edda* is a basic mythology that includes the creation myth, the various gods, and the layout of what the Norse saw as the world, both spiritually and physically, including the roles the gods play in life. One tale important to the iconography of the picture stones, is the role of Odin and the Valkyries. On the battlefield, when warriors die, Odin comes forth, and with the Valkyries, raises the dead to bring them back to Valhalla, the Hall of Odin. Valhalla is a place all warriors aspire to earn admittance, because it is the place where the best warriors are selected from the dead to join Odin's army to fight during Ragnarok, the Norse apocalypse. The Valkyries' role is to serve the warriors mead after their long days spent fighting each other in front of Valhalla, readying for Ragnarok. This mythical role of Odin and the Valkyries is seen in the images of the stones, as are other myths and legends from the other *Eddas*.

Other iconographic takes on the stories include scenes from mythological legends of the *Elder Edda* and *Poetic Edda*. The image of a woman facing a ship full of men and offering a drinking horn or rings has been interpreted as being a welcoming scene from the saga of Hildir. The Hildir saga involves the woman Hildir who is abducted by a king and makes a bad situation worse with her behavior, while the men try to make peace. The

men end up battling, and the image shown on the stones could be that of her welcoming her father to the battle, which she ensures never ends by taking the role of a Valkyrie and raising the dead on the battle field so that they may fight forever (Guðmundsdóttir 2011:60-62). Another welcoming scene commonly studied on the stones is that of the woman facing the man on horseback with a drinking horn in her hands. This scene has been interpreted as a Valkyrie welcoming a slain warrior to Valhalla, the heaven realm for warriors selected by Odin to serve in his army of fallen warriors until Ragnarok, where they will fight against the god Loki. Looking at the direction the warrior is facing versus the direction of the ship, plays a part in the meaning. When the ship is facing in the same direction as the warrior, as is most often the case in the stones, then it means the warrior has departed one place and is being welcomed here (Ney 2011:73, 76).

Guðmundsdóttir also has done work with the stones in relation to the myth of Gunnar and his death in the snake pit from *Volsung Saga* of the *Poetic Edda*. She discusses the ways in which it could not be Gunnar, and suggests allusions to Loki after his capture for killing the God Baldr when he had a snake drip venom on him for punishment (Guðmundsdóttir, Cosser 2012:1034-1035,1038).

Given all the work with the iconography of Viking Age stones it could be assumed that there would be research on their use and purpose, but this is not the case. Sune Lindqvist did some research on the use of the Groups C-E stones, however, it was not done very thoroughly, and was mainly about where they were found. Anders Andréén has done an excellent study in their representing doors for the dead. He takes into account the findings of stones at borders and with graves as door ways to their ancestors where they would take ritual meals with them, according to food scraps and bones found at the

stones. Alexander Andreef also looks at bones, but his bones are those leftover from cremation burials at the stones, which he interprets as a part of the stone being erected (Andreef 2011:142-143). These three researchers' works are the summation of Viking Age stone use analysis and this lack of literature on the presents a prime opportunity for the present study, which tests the theory of the Viking Stones as death memorials using the theory presented in Björn Varenius' article.

Chapter 3: Methodology and Criteria Analysis

This chapter explains each method used in synthesizing and analyzing the data gathered on the Gotland picture stones, and explaining what the stones are, how they were made and their function. These methods include the creation of a database, qualitative analysis of the iconography, context analysis, and landscape discussion. Following these methodologies is a discussion of the criteria used to answer this problem.

Database

The database which I created for use in this thesis consisted of iconography found on the Klinte Hunninge I, Lärbro Stora Hammars I, Stenkyrka Smiss I, Ardre kyrka VIII, Alskog Tjängvide I, and Lärbro Tängelgårda I stones. The variables which I observed the presence of on the stones are: Men, Women, Ships, Battle scene, Domestic scene, Odin, Sleipnir, Valknut, Valkyrie, Warriors, Shield, Sword, Spear, Bow, Axe, Horses, Cattle, Dog, Raven, and Eagle. These variables were collected into a database using visual examination to determine how many variables were present on each stone. These values are to be used in the statistical analysis for this thesis.

An additional database was created based on presence or absence for the same variable. This database was organized into a chart with the stones as the independent variables and the variables as the dependents with a check mark denoting whether a certain variable was found on the subsequent stones. This will be used for a qualitative analysis of the basic data collected on the imagery of the Gotland picture stones, looking at what variables appear most often, what variables appear most often with one another, as well as those variables which do not occur together on the stones, provided they are deemed significant and not coincidental.

SPSS

Utilizing the database which has been created I will use SPSS to run statistical analyses. The analyses run will include: Descriptives and Frequencies.

Descriptives provides the specific minimum, maximum, and mean of the data, and this will be run on all data as well as by group. Frequencies gives me the same information in a different chart format, as well as individual histograms for the frequency of each variable. Frequency will also be run overall and by group.

For each stone I will explain results of the statistical analysis on the variables overall, per group, and per stone. The stone has an overall meaning, but the panels each tell a part of that story and are, therefore, important to examine individually. The explanation will be shown using a variety of graphs and charts created for the data.

From the present or absent database I will draw correlations between images which occur together on stones, as well as images which occur together spatially. Those images which occur together spatially in a way which would makes them appear to interact with each other will be analyzed, and also the presence of some images on the same stones as others will be used for identification and correlation. These correlations will be used to identify motifs on the stones.

Iconographic Analysis

The examination of symbols and their meaning is a key part of Post-processual Archaeology. To do this it is useful to be familiar with some anthropological theories regarding symbols. Clifford Geertz was an American anthropologist who started his career post World War II through ethnography of cultures like the Javanese. His theory develops, in a self- described stage, into the analysis of symbols and culture as a system.

Geertz focused on semiotics within culture and religion; semiotics being the study and analysis of symbols.

Geertz's focus on symbols is an important milestone for Symbolic Anthropology, a branch of anthropology to which he is a major contributor. Geertz defines religion as a system of symbols which acts to establish powerful, long lasting moods and motivations by formulating conceptions of such factual force that they are believed as realistic by people. His focus on symbols breaks down culture into very small parts to analyze each section and place its meaning and value to the culture into its system.

His traditional influence for this theory is that of Max Weber and his designation of "Man as an animal in a web of significance of his spinning". Man is forever surrounded by symbolism and the acknowledgment and analysis of this symbolism by anthropologists pushes our understanding of other cultures forward (Geertz 1973, Moore 2009).

Geertz also organized a theory called "Thick description", which is the gathering of all possible meanings for one specific symbol, action, etc, and analyzing them for value in the cultural system. Gilbert Ryle gave an example for this: an eye twitching versus an eye winking. A twitch of an eye can be involuntary and mean little to nothing, but the act of winking has many meanings, like teasing, non-verbal cue of interest, denoting a private joke, indicating a connection between the winker and winkee.

Going along with this example, Geertz uses thick description as a system for data collection and as a tool for looking at and understanding a culture system. In order to comprehend the big picture one must have all the details. In that vein, understanding a

culture is always an act of interpretation where one must place what is being analyzed into the local context where it is meaningful (Moore 2009).

A similar theorist to Geertz is Emile Durkheim, a traditional French anthropologist, with his social cohesion theory. Social cohesion is a shared system of beliefs and, in the case of Geertz, symbols, which persist in a culture to bind it together and transform it into local knowledge. For Geertz, this would consist of the combination of symbols into a system which is then shared by a culture.

Durkheim also has a theory that the sacred is the equivalent of social ideology and the culture is seen as the physical embodiment of a set of values (Geertz 1973; Moore 2009). In this study the physical embodiment of values and social ideology are the picture stones. Using these basics for this analysis, finding as many interpretations of images and motifs in order to make my own determination, I utilize an anthropological background for archaeology.

Context Analysis

Archaeology defines context as the position of an artifact at the time of discovery. This is a very basic definition which will be used to analyze not just an artifact, but its position in relation to other objects, and later landscape elements, to make inferences on its purpose and meaning in that spatial link. This will be done on three picture stone sites where the stones are in their original positions: Buttle Änge, Frojel Stengu, and Alskog Visne ängar. The artifacts at these sites are the picture stones themselves, their context is what has been found archaeologically around them.

Those items found around the stones are the items which are technically “refuse”, items which have been discarded from the cultural context and taken out of circulation.

Dr. Michael B. Schiffer, a founder of behavioral archaeology, explains this: “Lateral cycling describes the termination of an element's use (use-life) in one set of activities and its resumption in another...” (Schiffer 1972: 159). Utilizing other archaeologists’ prescribed meanings and interpretations for these objects will allow for a comparison for the Gotland context and its relevance for the picture stones. The main question is: What does their close proximity mean for this stone and its meaning?

Published papers on the excavations of these picture stone sites will serve as the source for what was found, as well as possible interpretations and corroboration for the finds. Other publications which discuss the finds at these sites will provide supplemental theories for the objects.

Landscape Discussion

The landscape discussion which will be done draws upon the context analysis and is included in the same chapter. This discussion will look at the geographical significance of where the stones are located. The elements expected to be found based on knowledge of Gotland’s geography are streams, rivers, Iron Age settlements, meadows, period roads, etc. The stone’s presence near these elements will draw its meaning from other known contexts which have been proven to have a specific reason for placement. For example, finding memorial rune stones by a Farmstead would be an example of erecting a stone to declare inheritance rights (Sawyer 2000).

Using published data of similar landscapes and their meanings in other published works I will endeavor to interpret the Gotland landscape surrounding the picture stone sites. The natural elements that the stones could be found near also have sacred meaning to Viking Age Gotlanders who erected them. This would endow the stones with a

significance playing into the archaeological context of finds as well as iconographical analysis.

Criteria Analysis

In order for this thesis to have any validity the criteria being analyzed to paint the desired impression must also have established validity. Thus an analysis of this criteria becomes necessary to answer Hypothesis 1: The criteria of iconography, landscape, and context all can be relied upon to have the connotation of a relationship with death and mortuary practices. It is necessary to do Context and Landscape discussions due to the lack of historical sources for the Gotland picture stones. With the absence of history archaeology is relied upon to provide answers to those questions brought by the stones, like: What were they used for? What could they mean?



Figure 3.1 View of the Picture Stone Hall at the Gotland Museum.
(Photography by Spears 2014)

The criteria which are used include the stones which are to be used for the database and iconography analysis, but most of all the variables used and the sources providing sacred meaning must be analyzed for validity. In performing this criteria analysis I will prove my Hypothesis 1 correct.

Stone Criteria

The stones used in the Iconographical Analysis of this thesis have been chosen based on a variety of features. The first is the clarity of the images painted on them by Sune Lindqvist. Even though the stones were painted over sixty years ago, they are still quite legible. As a result of this there is also a wealth of previous study done on these stones which can be drawn on for this thesis.

The stones are also quite easy to get access to, because they are on display at the Gotland Fornsal Museet, Bungeemuseet, and the Swedish National Antiquity Museum in Stockholm. Their presence as displays in these museums tells me that they were picked as the best examples of Gotland picture stones for this time period. Out all the stones examined, these six stones are those which were chosen to be on display and are meant to represent the full corpus of picture stones. This is the biggest reason I have chosen these stones.

Iconography Criteria

The icons depicted on the picture stones of Gotland follow a basic style. The criteria which needs to be made valid is the icons' which are being used for the statistical analysis of the iconography and their meaning beyond a basic image. The icons of this study are being used for iconography analysis, so their meaning beyond a basic image needs to be verified. The primary sources cast doubt, but this thesis can use them for

basic connections to overarching themes when backed up by other material items bearing a similar image and corroboration by other scholarly works. These three items in some combination would verify the legitimacy of these icons in this study.

Variables

When examining the images on the picture stones some are obvious and some require the person to make his or her own judgements. The variables used for this thesis fall under both of those categories.

The following variables are variables which are delineated based on visual examination: Men, Women, Ships, Valknut, Warriors, Shield, Sword, Spear, Bow, Axe, Horses, Cattle, and Dog. Men on Gotland Picture stones can be identified by their pointed beards, wearing of breeches and shirt, as well as the presence of weapons and sometimes a helmet. Women are identified by the ankle length dresses worn, the hair long down the back, often in an intricate bun and hair flowing from it. The two styles of dress clearly delineate a pattern of dress as the basic variable difference of males and females on the stones.



Figure 3.2 Warrior from KLINTE HUNNINGE I.
(Photography by Douthitt 2014)

The Warrior variable will include those figures carrying weapons, such as swords, shields, axes, bows, or spears (Figure 3.2). Upon first analysis the warriors are all men based upon their dress, breeches and shirt. There is evidence in the archaeological record of females who could have been fighters, like the burial at Repton in England; however, for the purpose of this study, with this specific pattern of the apparel, this knowledge will not factor into the analysis, but does need to be mentioned.

Ships are the most basic variable found in this study. The ships are typically at the bottom of the picture stone and are long boats with a fully set square sail, with warriors holding shields inside of it. Shields are identified as circles carried by a male figure. Swords, spears, bows and axes are also simple to identify based on their representative shape present on the picture stone.



Figure 3.3 A ship on the bottom panel of LÄRBRO STORA HAMMARS I. (Photography by Douthitt 201)

The animals found on the picture stones are simple outlines, just as we know from conventional knowledge. For example a horse: appears as an animal with four legs, longer neck, long face, and could have a rider on top of it, while cattle will look like

cattle, with four legs, small horns and stout body. The outline of the dog, however, is my interpretation of those figures featuring a four legged smaller animal with a long tail.

Those variables not already mentioned are variables which require explanation and evidence for their interpretation. These include: Battle Scene, Domestic Scene, Odin, Sleipnir, Valkyrie, Raven, and Eagle. These variables will now be explained and given their designation for the purpose of this study.

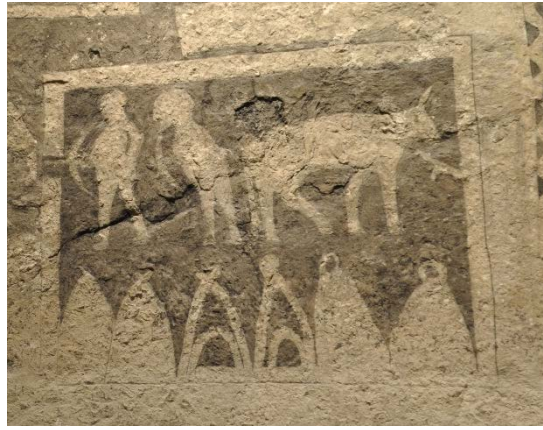


Figure 3.4 Cow from KLINTE HUNNINGE I, also a Domestic Scene example. (Photography by Spears 2014)



Figure 3.5 Top panel of KLINTE HUNNINGE I showing a Battle scene, Valkyrie, and dog. (Photography by Douthitt 2014)

Battle Scenes in contrast to Domestic Scenes depend on the combination of variables present on the stone. This can apply to the overall stone or to individual panels which could have different scenes on them. In addition, a stone can be both a battle and domestic scene. The Domestic Scene (Figure 3.5) would be identified by the presence of women, animals, and men, with the absence of weapons. This will depend on the perspective of the viewer. A Battle Scene (Figure 3.6) would be identified by the presence of warriors with weapons, and they could be engaged in fight, in a straight line facing a similar line, in a boat with the prow towards a line of warriors, etc. This combination can vary.

The variables related to myth are some of the most important ones in this discussion. Odin, Valknut, Sleipnir, Valkyrie, Raven, and Eagle variables are based upon knowledge from the Sagas in the majority of studies. The study and discussion of the Sagas are extremely useful for this interpretation due to the difference in dates for when the stones were made and when the Sagas were written down.

The picture stones date to 700-1000 AD, while the Sagas were not written down by Snorri Sturluson until the thirteenth century (Sturluson 2005:x). This presents a problem because the sagas are based upon oral traditions of formerly pagan Christians. Oral traditions in and of themselves are questionable because of the fact they are passed on from memory. Like a game of Telephone, small details can get lost and change the stories over time.

The other major problem is the time and distance differential between the Sagas and the picture stones. Two hundred years have passed between them, and in addition, to the distortion from transmitting myth in oral form, and the conversion to Christianity, you

end up with a collection of myths which may or may not be entirely valid. The Sagas were also written in Iceland, not Gotland, Sweden, which means the myths could be different regionally. However, working in favor of a somewhat shared basic meaning is that the Icelandic Sagas do correspond with other medieval texts in Scandinavia (Hedeager 2011:25). Professor Alexander Bugge, a renowned scholar of the Viking Age, explicated that: “The oral saga, the saga that was only narrated, and not written down, is however much older...Earlier, however, than in Norway or Iceland the saga developed in the Viking settlements on the British Isles. The first saga to arise concerning a Norwegian king was the Saga of Olaf Tryggvason, who fell in the year 1000.” (Bugge 1909:253). This firmly places some Sagas of the oral tradition in the end of the Viking Age when picture stones were still being erected.

That basic meanings or levels of importance could be passed down, like the main characters of a story, is entirely feasible. It would not be a reach to say that the basics of these myths, the characters, their symbols, etc, could be part of “a *longue durée* of fundamental myths and systems of beliefs” (Hedeager 2011:26). This thesis will not use these myths as factual to the letter. The Sagas will be used as a scale for importance for individual variables. That basic characters and characteristics have been passed along throughout Scandinavia and time, shows that those figures are important and have a great social value. They have been shown in artifacts, sagas, and picture stones.

In order to use these figures as variables in this thesis, they will need to be found outside of picture stone iconography. For the variables of Valkyries, Odin, Sleipnir, Raven, and Eagle to be valid variables they must have an outside corroboration as well as

their presence in the Sagas. The outside corroboration I seek would be an archaeological object bearing a similar image.

Odin is the lead god for the Norse Pantheon who has one all seeing eye and two ravens named Huginn and Muninn, or Thought and Memory. He is thought to be “Father of the Slain [Val-Father], because all who fall in battle are his adopted sons” (Sturluson 2005:31). For the variable of Odin this can be seen in the variety of gold bracteates bearing images of a rider on horseback often with a bird or two around the figure, commonly interpreted as ravens, see Figure 3.7. The bracteates date to the late Migration Period, 500-700 AD, and are found in Sweden, for example the Tjurkö bracteates (Hauck 1978).



Figure 3.6 Raven on LÄRBRO
TÄNGELGÅRDA I. After
Gotlanskt Archiv 2012:20.

These two facts, the rider on horseback and the ravens, correspond with what the Sagas say of Odin riding into a battle and having two ravens. A further example of Viking Age depictions of Odin are from Ribe, Denmark, on a lead metal castor's mold, depicting a helmed man with two ornaments, interpreted as birds, the ravens Huginn and Muninn, and the man as Odin (Rotan 2015:63, Sturlusson 2005:47). For this thesis,

Ravens will be denoted as the bird figures which appear in profile, while the Odin figure will be fully delineated at a later point. These examples also reinforce the presence of the Ravens variable suggesting that a mounted rider would be Odin.

Sleipnir is one of the trickier variables to interpret. Sleipnir is the eight legged horse which Odin rides between realms. He is known to be the fastest horse in Norse Myth, and the offspring of the god Loki (Sturluson 2005:52). On the picture stones Sleipnir is identified by the presence of eight legs: a simple determination seen in Figure 3.8. Other eight-legged horse imageries have been found on the Viking Age Överhogdal Tapestry in Sweden. Sleipnir is thought to be a Norse manifestation of shamanic horses like those found in Siberia (Price 2004:118). Backing up a shamanic horse interpretation, as well as Sleipnir's, connection with death, is the presence of horses in burials. For example the burial of a warrior at Birka contained two horses with the deceased (Roesdahl 1998:155). As a common burial good which is found all over Scandinavia, the finding of horses on picture stones is not a surprise. For there to be a myth regarding a horse with exaggerated speed who can traverse realms, including the realms of death, for a culture of people who regard horses so highly that they are sacrificed for burials, makes sense. For that horse to be connected to a god, Odin, who mythologically is the Father of the Slain, solidifies the connection of an eight legged horse with a rider on the picture stones being interpreted as Odin and Sleipnir.

The variable of Odin will depend on the presence of one or more other variables for its accurate identification. The primary figure which could be interpreted as Odin will be a single mounted male rider. If this rider is present with ravens, Sleipnir, or Valknuts, a three pronged multi-triangular symbol which has traditionally been associated to

represent a religious symbol then it could be Odin (Nylén 1988:62). The religious symbol in this stone shows a sacrifice, and it was common to give sacrifices to Odin so it shall be defined as Odin. If this Variable is also present with the variable of a Valkyrie, discussed below, then possible identification can be made as well.



Figure 3.7 Odin riding Sleipnir with a Valkyrie
on ALSOG TJÄNGVIDE I.
(Photography by Spears 2015)

The Valkyries are women who are also associated with Odin in the Sagas. These are minor goddesses who go forth on the battle field and selected those men who will reach Valhalla, as well, serving the mead at Valhalla (Sturluson 2005:44-45). The variable of Valkyrie is a female figure in an ankle length dress who is also holding a drinking horn with a male rider in the same panel, as seen in Figure 3.8. This is commonly known as the Welcome Scene, interpreted as a Valkyrie welcoming a warrior or Odin to Valhalla (Ney 2011:73). Archaeologically this image can be backed up by a variety of pendants featuring a woman holding out a drinking horn found in graves at Birka, Sweden, dating to the Viking Age (Gräslund 2012: 253). Valkyries are death connected figure who are also connected to Odin.

An eagle will be identified as a bird with the wing tops sitting high compared to a raven, as seen in Figure 3.9. This variable is significant given its connection with the rite

of the blood-eagle. A blood-eagle is a method of execution where the back is opened up, the ribs cut, and the lungs removed to sit on the shoulders of the deceased like the wings of an eagle. This was done to the worst of perpetrators, the most prominent being King Ælla of Northumbria the killer of Ragnar Loðrókar, a mythical king in the sagas (Frank 1984:333-334). There is a similar problem with the sources for the blood eagle as with the sagas. The sources were recorded long after the events happened. However, this very interesting interpretation ought to be discussed.



Figure 3.8 Eagle on LÄRBRO STORA
HAMMARS I. (Photography by Douthitt 2014)

These figures have all been proven as valid in with the backing of other similar images found in the archaeological record. Most of these indeed have been found all over Scandinavia, backing up the idea of a shared meaning. Dr. Lotte Hedeager, a leading expert on Nordic and Eaurpean early Iron Age, believes: “Central myths representing the wisdom and knowledge of the pre-Christian world contain core elements that remain stable through time, although encrusted in new layers of meaning, and adapted to new contexts.” (Hedeager 2011:25). At the core of Norse religion are these main characters of the sagas, found throughout time, in different regions, and recur even today. The basic imageries remain the same, but their interpretation by those people who encounter them changes. In the Viking Age they were the gods, while today they are historical or pagan

gods of a New Age religion. These images are, therefore, still valid variables and meet the criteria of being included and important in this thesis.

Chapter 4: Iconography Analysis

This iconography analysis is a study of frequency and correlations which can tell us how the images interact together and tell their story. Using mathematics in conjunction with personal observations helps establish/give importance and meaning to the images themselves. This section will feature descriptions of the stones individually, as groups, and as a whole group, along with motif analysis and discussion of significant connections.

Descriptions

The picture stones used for this study contain eighteen different variables for analysis. Those variables include: Men, Women, Ships, Odin, Sleipnir, Valknuts, Valkyries, Warriors, Shields, Swords, Spears, Bow, Axe, Horses, Cattle, Dogs, Ravens, and Eagles. There are a total of 319 images on these stones which have been included in this analysis. The percent of that total by each variable is: Men 12.85%, Women 3.45%, Ships 2.82%, Odin .63%, Sleipnir .94%, Valknuts 1.88%, Valkyries .94%, Warriors 32.29%, Shields 17.55%, Swords 17.55%, Spears 3.45%, Bow .63%, Axe .63%, Horses 1.57%, Cattle .31%, Dogs .94%, Ravens 1.25%, Eagles .31%.

Description of Group C Stones

A total of 205 images occur on the Group C stones, made up of the Klinte Hunninge I, Lärbro Stora Hammars I, and Stenkyrka Smiss I. Of the 205 images the percent for each variable is as follows: Men 4.88%, Women 3.41%, Ships 2.44%, Odin 0%, Sleipnir 0%, Valknuts .98%, Valkyries .49%, Warriors 32.68%, Shields 26.34%, Swords 18.45%, Spears 5.37%, Bow .98%, Axe 0%, Horses 1.46%, Cattle .49%, Dogs .49%, Ravens .98%, Eagles .49%.



Figure 4.1 KLINTE HUNNINGE I.
(Photography by Douthitt 2014)

Klinte Hunninge I (Figure 4.1) contains 39 images, the percent for each variable is as follows: Men 2.56%, Women 5.13%, Ships 2.56%, Odin 0%, Sleipnir 0%, Valknuts 0%, Valkyries 2.56%, Warriors 35.9%, Shields 28.21%, Swords 7.69%, Spears 2.56%, Bow 5.13%, Axe 0%, Horses 2.56%, Cattle 2.56%, Dogs 2.56%, Ravens 0%, Eagles 0%. The top panel of Klinte Hunninge I features a male warrior holding a spear and riding a horse surrounded by two other male warriors bearing swords fighting, a woman figure bearing a drinking horn identifying her as a Valkyrie, another male figure to the back of the rider appearing to be floating, carrying a ring, and a dog.

The rest of the stone is one large panel which can be read as divided into three registers. The top of the panel features a full sailed ship with warriors bearing shields. Some of the figures also have swords, while the ship appears to be resting atop waves. Immediately below the waves to the left is a box filled with wavy lines and a male figure inside with a female figure standing outside the front of the box holding a similar wavy line. Below this another woman holding a wavy line stands alone, a male figure holding an object faces the right where there is another box containing two male warriors holding bows and a cow.



Figure 4.2 LÄRBRO STORA HAMMARS I
(Photography by Douthitt 2014)

Lärbro Stora Hammars I (Figure 4.2) contains 79 images, the percent for each variable is as follows: Men 6.33%, Women 1.27%, Ships 2.53%, Odin 0%, Sleipnir 0%, Valknuts 1.27%, Valkyries 0%, Warriors 30.38%, Shields 21.52%, Swords 29.11%, Spears 1.27%, Bow 0%, Axe 0%, Horses 2.53%, Cattle 0%, Dogs 0%, Ravens 2.53%, Eagles 1.27%. This is the most elaborate stone with six panels. The topmost panel contains 3 male warriors with swords. The second panel contains a horse with no rider, two swords, and two warriors. The third panel shows a tree with a male warrior beneath it. A male figure stands in front of the warrior, facing a platform with another male figure leaned over it, and a third male figure standing behind him. Above the bent over male figure is a Valknut and an eagle and behind the next man is a raven. Immediately behind the raven are four warriors with shields and swords. The fourth panel shows a boat with four sword and shield carrying men heading towards a woman figure who has three similarly armed warriors behind her. The fifth panel features two warriors with swords facing a horse that has a raven on top of it and a male figure laying down under the horse, and two male warriors with shields and swords behind it. The sixth panel is a full sail ship which has warriors and shields inside it.



Figure 4.3 STENKYRKA SMISS I
(Photography by Douthitt 2014)

Stenkyrka Smiss I (Figure 4.3) contains 87 images, the percent for each variable is as follows: Men 4.6%, Women 4.6%, Ships 2.3%, Odin 0%, Sleipnir 0%, Valknuts 1.15%, Valkyries 0%, Warriors 33.3%, Shields 29.89%, Swords 13.79%, Spears 10.34%, Bow 0%, Axe 0%, Horses 0%, Cattle 0%, Dogs 0%, Ravens 0%, Eagles 0%. The top two panels of this stone are illegible. The third panel has three women followed by a series of shapes and six warriors with spears. The fourth panel has seven warriors with swords behind a woman who is holding a figure eight while facing a boat containing four warriors with shields and swords inside appearing to sail to her. The fifth and bottom panel is a full sail ship holding eleven warriors with swords and shields, and above the warriors to the far left is a Valknut.

Description of Group D Stones

A total of 114 images occur on the Group D stones, made up of the Ardre kyrka VIII, Alskog Tjängvide I, and Lärbro Tängelgård I. Of the 114 images the percent for each variable is as follows: Men 27.19%, Women 3.51%, Ships 3.51%, Odin 1.75%, Sleipnir 2.63%, Valknuts 3.51%, Valkyries 1.75%, Warriors 31.58%, Shields 1.75%, Swords 15.79%, Spears 0%, Bow 0%, Axe 1.75%, Horses 1.75%, Cattle 0%, Dogs 1.75%, Ravens 1.75%, Eagles 0%.



Figure 4.4 ARDRE KYRKA VIII.
(Photography by Spears 2015)

Ardre kyrka VIII (Figure 4.4) contains 36 images, the percent for each variable is as follows: Men 72.22%, Women 5.56%, Ships 5.56%, Odin 2.78%, Sleipnir 2.78%, Valknuts 0%, Valkyries 2.78%, Warriors 2.78%, Shields 0%, Swords 2.78%, Spears 0%, Bow 0%, Axe 0%, Horses 0%, Cattle 0%, Dogs 2.78%, Ravens 0%, Eagles 0%. This stone has two panels with a conglomeration of images. The top panel shows a bent over male figure, Odin riding Sleipnir, a wagon and a series of four men.

The bottom panel features a full sail ship with six unarmed male figures inside, and a series of men to the right of the ship, but it is too worn to identify what they are doing. Underneath this there are male figures and female figures, a building structure, a Valkyrie near the bottom above a dog, and next to this another building with a pig and two male figures. On the other side of this structure is another male as well as two more males in a boat fishing.



Figure 4.5 ALSKOG TJÄNGVIDE I.
(Photography by Spears 2015)

Alskog Tjängvide I (Figure 4.5) contains 27 images, the percent for each variable is as follows: Men 0%, Women 7.41%, Ships 3.7%, Odin 3.7%, Sleipnir 3.7%, Valknuts 0%, Valkyries 3.7%, Warriors 44.44%, Shields 0%, Swords 25.93%, Spears 0%, Bow 0%, Axe 3.7%, Horses 0%, Cattle 0%, Dogs 3.7%, Ravens 0%, Eagles 0%. This stone has two panels. The top panel features Odin riding Sleipnir, facing a Valkyrie with a drinking horn. Above Odin is a bent male figure, a floating male figure, and in front of Odin is a woman figure, a structure of unknown function, and behind the Valkyrie is a dog, and male warrior with an axe facing a female figure. The bottom panel features a full sail ship with nine male warriors inside.



Figure 4.6 LÄRBRO TÄNGELGÅRDA I.
After Lindqvist 1942:Fig 86.

Lärbro Tängelgård I (Figure 4.6) contains 51 images, the percent for each variable is as follows: Men 9.8%, Women 0%, Ships 1.96%, Odin 1.96%, Sleipnir 1.96%, Valknuts 7.84%, Valkyries 0%, Warriors 45.1%, Shields 3.92%, Swords 19.61%, Spears 0%, Bow 0%, Axe 1.96%, Horses 3.92%, Cattle 0%, Dogs 0%, Ravens 3.92%, Eagles 0%. This is a four paneled stone. The top panel has a male figure standing between two ravens, with one raven looking to be pecking at a man laying down on his stomach. Below this are two male warriors with swords facing off, three more warriors with swords facing a horse with no rider that is standing atop a helmed man. The second panel features three warriors with swords and Sleipnir. The third panel has a man facing a horse and male rider with three Valknuts between the horse's legs. Behind the horse are four more male figures holding rings. The bottom panel features a full sail ship holding nine sword carrying warriors.

Motif Analysis

With a basic description of the stones and the variables present, analysis of what is being shown can be performed. The combination of certain variables found interacting together, will be interpreted to show different motifs on the stones. Rather than being merely variables they are now beginning to tell a story.

Battle Scene v. Domestic Scene

The scenes which occur on all of the stones can be classified as either Battle or Domestic. A battle scene would feature a variety of weapons, warriors, and perhaps horses. A domestic scene would feature male and female figures with animals, and have a lower number of weapons and Warriors.

All of the stones, except for Ardre Kyrka VIII, feature what can be interpreted as a Battle scene. In Klinte Hunninge I the top panel featuring the swordsmen and horse rider with a spear are all images which connote battle. This stone has a higher percentage of those variables which confirm its identification as a Battle scene: Warriors at 35.9% is much higher than the 2.56% of just males, while the weapons count makes up 43.59% of the total images on the stone. Lärbro Stora Hammars I has five of its' six panels feature scenes of battle. All but the bottom panel with the full sailed ship have either warriors fighting or warriors standing in lines with weapons ready to fight. The fifth panel even features a warrior lying down underneath a horse in the midst of Warriors with swords drawn, I interpret this as a deceased Warrior from this battle scene.

This stone also has a higher percentage of Warriors (30.38%) compared to men (6.33%), and the weapons make up 51.9% of all the images on the stone. Stenkyrka Smiss I is much the same layout for a Battle scene, with lines of warriors and warriors in boats making up 33.3% and weapons 54.02% of the total images. Alskog Tjängvide I is interpreted as a Battle scene because the top panel features a warrior with an axe and the warriors in the ship at the bottom. The percent of warriors to men here is 44.44% to 0%, while the weapons make up 29.63% of the images. But what is missing from this scene are warriors engaged in a battle so this would be a loosely defined battle scene.

Lärbro Tängelgårda I has battle scenes in the top two panels with warriors engaging each other and walking in a direction with their swords. This panel also features another Warrior lying deceased beneath a horse in the battle scene. The warriors outnumber male figures here 45.1% to 9.8%, with a weapons percentage of 25.49%.

The variables which make up a domestic scene are male and female figures, with animals and a fewer number of weapons present. The only stone which features only a Domestic scene is Ardre kyrka VIII. On this stone there are a variety of figures, as explained above, but what is absent is what makes it a Domestic scene. This stone does not have a large number of weapons, overall weapons only make up 2.78% of the total images on the stone, and the same for warriors at 2.78%. What is higher is the number of women (5.56%), men (72.22%), and animals (dog and pig) on the stone.

However, there are stones which feature both scenes on them: Klinte Hunninge I and Lärbro Tängelgård. Klinte Hunninge I has a scene on the bottom of two males in a structure with bows. What makes this scene domestic is the presence of a cow and the fact that the men are not engaged in a fight with each other or other images. Lärbro Tängelgård has a scene in the third panel which features a male facing a horse and rider which is followed by four men bearing rings. This scene has no weapons or fights being engaged, but rather, it seems to be a procession to this one man at the front of the line.

When comparing the frequency of Battle versus Domestic scenes between Groups C and D one finds that all the stones in Group C have a battle scene, while two out of three in Group D have one, although one of those is a loose identification. Group D also has two out of three stones with Domestic scenes, though one of those features both a Battle and a Domestic scene. In Group C only Klinte Hunninge I features both a battle and domestic scene. From this, it would appear Group C has a stronger tendency towards Battle scenes. While Group D does have them, they are more infrequent and feature more Domestic scenes.

Battle scenes are a motif which features iconography relating to death based upon the determinations of this study. The Domestic scenes themselves do not feature iconography relating to death. However, when they appear on stones with battle scenes the overall interpretation of that stone shifts from life to death. The presence of a Domestic scene on a stone with Battle scenes seems to be done as an interpretation of actions during life, like Warriors fighting. The ones who raised the stones placed images representing what was done to cause death and in some cases images reflecting what could have been important in life.

Ships

The obvious and prominent motif on the stones is that of a full, square sailed Viking long ship. Mostly they occur as the bottom panel, which in this study occurs 66% of the time, but they also occur in other parts of the stone. There are often more than one ship present on the stones as well. Due its frequency it is fair to estimate that ships were very important to Gotlanders. This is an obvious observation because Gotland is an island, and in order for the people to have any connections with the outside world they need a strong seafaring tradition. I feel this is a correct assumption due to the presence of harbors like Paviken and Ridanes on Gotland, as well as their stone ship settings from the Bronze Age. However, they are not only present at locations on the coast in close proximity to water, so ships have a strong meaning overall on the island, not just the coast.

Bronze Age stone ship settings in Gotland were formations of large boulders set in the form of a ship near burial cairns. These ships were then used as burials for men, women, and children alike (Skoglund 2008:393-394). This equality of burial place shows

an importance of the ship in the daily lives of all Gotland and its continued importance is seen in the continuity of the ship as a symbol like seen on the Viking Age picture stones.

As a result of the continuation of importance, I suggest the concept of ships as a symbol of death. The dead used to be buried in the ship settings, so it would make sense for the ship to function as a death symbol to endure through time.

The Welcome Scene

One scene which frequently occurs features a woman standing in front of a rider or ship. The ship and rider are always facing towards the female figure, as if sailing towards her. This scene occurs four times, each time on a different stone. The scene occurs on all three Group C stones, and on one Group D stone.

When the scene has a woman welcoming a boat there are always warriors standing behind her and in the boat, like on Lärbro Stora Hammars I (Figure 4.7) and Stenkyrka Smiss I. The picture stones on which this scene occurs are also the more organized stones with a higher number of panels. The other type of Welcome scene occurs with a lone woman, a Valkyrie, offering up a drinking horn to a horse and rider, like on Klinte Hunninge I and Alskog Tjängvide (Figure 4.8). This scene occurs on stones which have two panels, one smaller at the head of the stone, and a larger one for the rest of it. The scenes also correspond with stones featuring battle scenes.



Figure 4.7 Welcome Scene on LÄRBRO STORA HAMMARS I. (Photography by Douthitt 2014)

There are a variety of interpretations for this style of scene. The first concerns the woman greeting the boat of warriors. Multiple scholars have interpreted this scene as being either Hildr, from the Hildr Legend, Guðrun from the Völsunga saga, or even Helen of Troy. The Hildr legend is from the sagas, and is about a woman who was kidnapped from her father and taken away to an island. When her father comes to save her the two men try to make peace, but Hildr intervenes and the two forces fight while Hildr watches. Guðrun is shown in the scene as saying farewell to her brother, while Helen of Troy is seen as the woman in the middle of two forces like in *The Iliad*. The Helen identification makes sense if one believes the Gotlanders are Battle of Troy survivors, like Michael Srigley does (Guðmundsdóttir 2011:60-63).



Figure 4.8 Welcome Scene on ALSKOG TJÄNGVIDE I.
(Photography by Douthitt 2014)

The other type of Welcome Scene, featuring the Valkyrie, is commonly interpreted as a Valkyrie welcoming a fallen warrior to Valhalla. In the Sagas the Valkyries are the ones who select who will go to Valhalla, and serve the mead to the men there (Sturlusson 2005:44-45). There is also the already stated similarity between the images identified as a Valkyrie on the stones and pendants from Sweden. It therefore makes sense that a woman with a drinking horn would be a Valkyrie.

My interpretation agrees with the Valkyrie welcoming a fallen warrior to Valhalla. I also am applying this interpretation to the Welcome Scene featuring a woman greeting a boat. Gotland is an island, and in order to get around the rest of the Scandinavian World they would have to take boats. To them, this would also mean taking a boat to reach Valhalla, since they need a boat to reach everywhere else outside of their world.

Previous analysis was done above on these ships as symbols of death. I have already stated that I will use the sagas for the basic meaning and associations, rather than by the book definitions. From that, I suggest that the Valkyrie is a symbol of death due to the duties they performed on the battlefield selecting the dead for Valhalla and then serving them. Their duties give them a basic association with death, and for them to also appear as greeting those inside a boat, solidifies their association in the context of these picture stones.

Funerary Procession

The scene found on Lärbro Tängelgård I (Figure .9) in the third panel features a procession of figures beginning with a horse and rider followed by four male figures all holding rings and surrounded by rings. These rings have been interpreted as rings of honor, a popular symbol of loyalty (Nylén 1988:66). These rings are often found in graves and hoards.

Perhaps their large number and popularity in life carries over to death. These rings shown on the picture stone could be offerings for the deceased. Judging by the number of Valknuts around the horse, as well as the common image of a horse and rider being

welcomed by a Valkyrie, it is fair to say that the rider could be the deceased on their way to Valhalla, and the procession behind them carry rings as part of the ritual.



Figure 4.9 Funeral Procession on LÄRBRO
TÄNGELGÅRDA I. After Lindqvist 1942:Fig 86

Variable Discussion

A discussion of the patterns seen in the variables and what they could mean is an important aspect of this analysis. This section will present such a discussion using visual observations in conjunction with mathematical statistical analysis.

Male v. Female

The concept of male v. female is a common one in any anthropological and archaeological study. For these picture stones there is an obvious lack of women found on the stones. Men occur as 45.14% of all the images on these six stones while women only occur 4.39% of the time. This vast difference recommends that the society which raised the stones was dominated by the actions of men.

I would say that this is true. The actions of the men did dominate this society in that the men leaving to raid or trade was a big deal on Gotland, but was also an everyday occurrence. Further, their raids, treks, battles, and graves dominate, the world of archaeology. The archaeology for women is present, but I would say not as often examined until recently.

Something else I see in the stones which parallels what must have been a part of this society is that most of the women who are found on these stones have an important role: Valkyrie. They are symbols of death as discussed below, but perhaps they are also symbols reflecting the importance of women in the world of the living.

When men would leave to trade and raid the women would be left home tending farms, shops, children, and other domestic responsibilities. They kept everyday life going for the society itself when the men left. That is a huge role, which I believe could be carried over to a huge role in death, as is seen in the appearance of women in Valkyries.

Looking at Figures 4.10 and 4.11 the frequency of men versus women on the stones is shown. Men have higher, and more frequently high numbers of occurrence. However, if the stone containing 26 men is taken out the frequency of men and women is relatively similar. Conversely, this changes again if warriors are added to the number of men. With warriors included in these values, men make up 45.14% of the total images overall, while women and Valkyries only make up 4.39%. I believe this is due to men needing to go out and make a name for themselves, by fighting, trading, etc., in order to earn respect and an honorable death. Women on the other hand are the ones who stay home as mothers and workers for the shops, farms, and other businesses the men left behind. The women earn respect by doing these more safe tasks at home, and are therefore not represented on death memorials as often. They do not need to remind people of their deeds to earn respect because they perpetuated life at home, which is an essential task to earn them respect.

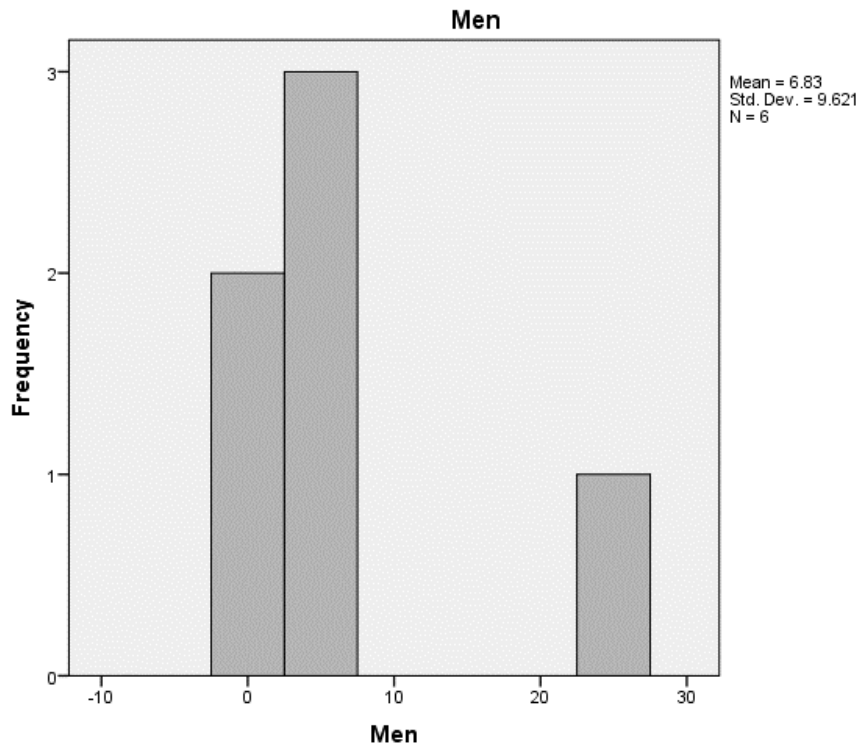


Figure 4.10 Male Frequency Chart Overall

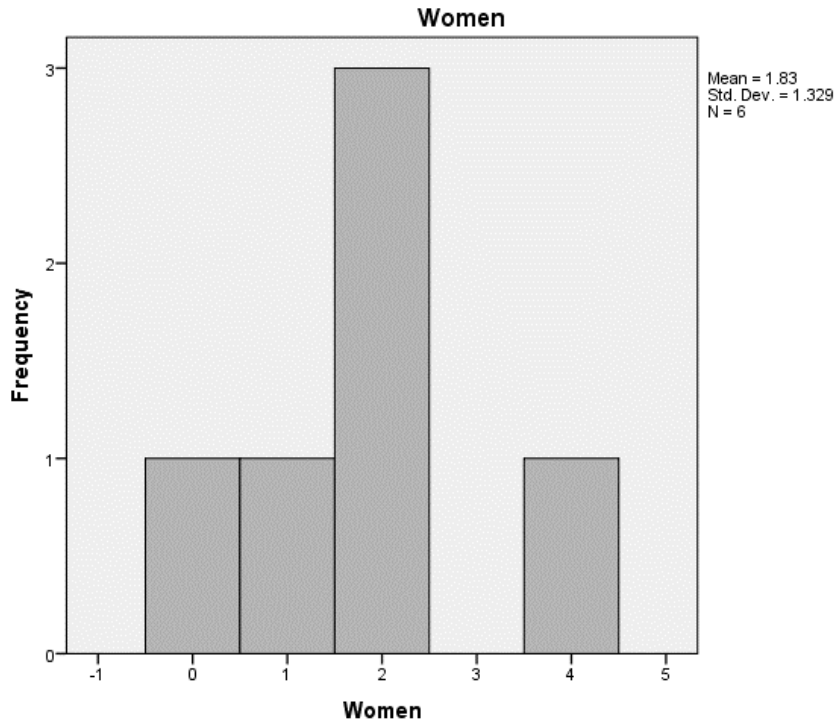


Figure 4.11 Female Frequency Chart Overall

Warriors

Warriors are an image which occurs the most over all the picture stones at 32.29%. When looking at the percentages of each stone, warriors always make up the highest percentage when there is a battle scene on the stone, which is five out of the six stones. They are also the images which have the most interactions in the images and are seen doing a larger variety of actions. Why is this?

Basing assumptions on what the iconography allows me to infer from the stones, I would say that this is true because warriors were so highly valued and because they often died. Being a warrior means fighting and risking death. As to their being the ones who have the wider variety of actions and interactions on the stones, I believe the stones are a representation of things warriors did, and also could have died doing. For example, a sword fight, a long voyage, protecting a cow, these are all dangerous actions which could cause death. This would make the image of a warrior on a monument such as the Gotland picture stones a reference to the risks they take and their deaths. Counting warriors in with the images on the stones establishes a connection with and connotation of death.

Weapons

There are five different types of weapons found on the Gotland picture stones used by Warriors: shields, swords, spears, axe, and bows. Overall, weapons make up 39.81% of all images found on the stones. Those found most often are swords and shields, with spears, axes, and bows occurring less often. What can this representation, or overrepresentation, of weapons tell us about the society of Gotland?

As an elementary point, swords and shields would have been the most often used weapon by those in the Viking Age based upon this iconography. Viking swords are

often found in graves, like in the boat burial at Hedeby (Roesdahl 1998:123). Swords were expensive, but necessary pieces for the Viking Age. Also found in graves, such as the Gokstad, are shields (Roesdahl 1998:143). These would be lifesaving, and as such had to cover the vulnerable parts of the torso and head, and for shields to be equally represented with swords (17.55% of all images) supports their importance.

The other weapons do not occur very often on the stones, spears at 3.45%, axes and bows both at .63%. Spears were the preferred weapon by those with wealth, while axes were considered “a cheap alternative”, despite their notoriety in pop culture today (Roesdahl 1998:142). This negative association is shown on the stones in the lack of axes, and slight increase in spears. The trend for the wealthy to prefer swords and spears, and to need shields, is supported by the stones since it would be the wealthy who could afford to raise such a stone in the first place. Therefore, the weapons they would prefer are reasonably the same ones which appear the most.

Eagles and Sacrifice

Only one stone features an eagle: Lärbro Stora Hammars I. The eagle occurs on the third panel above the male figure bent over. While I do not subscribe to this opinion, it is important to understand the view of sacrifice on the Gotland picture stones, particularly this one.

It has been interpreted that this panel shows three warriors hanging from the tree, while the man bent over with the eagle over head is having the rite of the blood eagle performed on him. This would seemingly be corroborated by the presence of Odin’s symbol the Valknut and the raven. Odin is known as the hanged god so hangings were a sacrifice to him, and the same could be said of the blood eagle (Frank 1984, Nylen

1988:62). For the purpose of this study I do identify the hanging of the warrior by the tree as a sacrifice and death connection, but the eagle is merely symbolic.

A Formula for Odin

Odin is a symbol which can only be identified when in conjunction with other symbols. The following observations can be made based on that premise to make up a formula for an Odinnic presence: Odin always appears with Sleipnir and a Valkyrie, but Sleipnir and Valkyries can appear without Odin. Ravens and Valknuts always appear together, but never appear with Odin.

These observations tell me that Sleipnir is the only variable which can positively identify Odin, which is corroborated by the presence of a Valkyrie greeting him with a drinking horn. Sleipnir represents the way to an afterlife, it was believed that Sleipnir could be ridden across realms to reach an afterlife. He therefore has a basic meaning of death himself, along with his connection to Odin.

The absence of Odin's ravens and Valknut when he is present, gives them the connotation of being suitable substitutes when Odin is not present. In the Sagas they are related to Odin, and although they have different meanings their basic meaning is a connection with Odin and observing. Their presence in his absence verifies that basic meaning. Due to their connection, ravens and Valknuts also can represent death in the picture stones context.

Another variable which does not occur with ravens or Valknuts are Valkyries. Those are the symbols which represent Odin when he is not present, and the Valkyries have been interpreted as welcoming the fallen warriors to Valhalla, which in the sagas is where Odin resides. I believe the ravens and Valknuts are not necessary in those panels

which could be Valhalla, because Odin is already there to symbolize “heaven”. There would be no need to include a stand in for Odin when he is already there. Just as they do not appear when he is identified elsewhere on the stones.

Summary

Overall there are more men than women present, especially when one includes the warriors as men. Group C has barely more men than women when not counting Warriors, but Group D has drastically more men than women without counting Warriors. This is due to the fewer Battle scenes found in Group D. Warriors still make up the highest percentage of images overall, with weapons being a close second. This holds true for Group C stones, but not so much for Group D, where men and Warriors occur at a closer percentage than overall and Group C.

Due to this, the presence of more Battle scenes found on the stones is a logical conclusion, but there are still Domestic scenes. The large amount of Warriors, weapons, and Battle scenes has been interpreted to represent the expected death of quite a few warriors, in how they died being shown and their weapons. Group D’s Battle scenes are more tame than Group C, in that the Warriors are not engaged in as many fights.

The representation of Weapons overall favor swords, shields, and spears, with a concentration in images of swords and shields. This is because of their high value on the battle field and to the wealthy who are buried with them. This trend continues for Group C and D, though Group D has a much lower percentage of weapons overall and shields. Swords remain higher.

The Welcome Scene depicting a woman greeting a rider or boat of warriors has been interpreted as a Valkyrie greeting fallen warriors, or Odin, at Valhalla. Originally

only the riders had been interpreted as being greeted by Valkyries, but further examination uncovered enough similarities and reason for the Gotlanders to expect to be greeted at their boat by a Valkyrie upon entering Valhalla. Group D, by the original identification of Valkyries, featured more Valkyries than Group C. After the new identification Group C now has more Valkyries.

Ships are present on every stone, but they are not prominent at the bottom panel of each stone. This prominent bottom panel occurs four out of six times, while the other two stones without it feature another ship elsewhere on the stone of a smaller size. The ships have also been determined to be symbols of death from a long standing connection of ships with death and burial in Bronze Age stone ships settings.

For Group C Sleipnir and ravens appear once on these stones, while Valknuts appear on more stones here than on Group D. Group D, however, is the only group where Odin appears himself riding Sleipnir, and Valknuts appear in a higher number on one stone in Group D than on all the stones in Group C.

To summarize, the iconography found on the picture stones do have an overall representation of death, based on their individual connections with death or associations with other images which relate to death.

ID	Stone Name	Stone group	Men	Women	Ships	Odm	Steipnit	Valkaut	Valkyrie	Warriors	Shield	Sword	Spears	Bow	Axe	Horse	Cattle	Dog	Raven	Eagle
1	Klinte Huminge I	C	1	2	1	0	0	0	1	14	11	3	1	2	0	1	1	1	0	0
2	Larbro Stora Hammars I	C	5	1	2	0	0	1	0	24	17	23	1	0	0	2	0	0	2	1
3	Stenkyrka SMSS I	C	4	4	2	0	0	1	0	29	26	12	9	0	0	0	0	0	0	0
4	Arde Kyrka VIII	D	26	2	2	1	1	0	1	1	0	1	0	0	0	0	0	1	0	0
5	Ålskog Tjängvide I	D	0	2	1	1	1	0	1	12	0	7	0	0	1	0	0	1	0	0
6	Larbro Tängelgarda I	D	5	0	1	0	1	4	0	23	2	10	0	0	1	2	0	0	2	0

Figure 4.12 Database Table showing the number of each variable that occurs per stone.

	Stone Group	Men	Women	Ship	Odm	Steipnit	Valkaut	Valkyrie	Warriors	Shield	Sword	Spear	Bow	Axe	Horses	Cattle	Dog	Raven	Eagle
Klinte Huminge I	C	X	X	X				X	X	X	X	X	X		X	X	X		
Larbro Stora Hammars I	C	X	X	X			X		X	X	X	X			X			X	X
Stenkyrka SMSS I	C	X	X	X			X		X	X	X	X							
Arde Kyrka VIII	D	X	X	X	X	X		X	X		X						X		
Ålskog Tjängvide I	D	X	X	X	X	X		X	X		X			X			X		
Larbro Tängelgarda I	D	X		X		X	X		X	X	X			X	X			X	

Figure 4.13 Database Viewer showing the Presence/Absence output for each variable per stone.

Chapter 5: Landscape and Context Analysis

The presence of picture stones in their original locations is something which is difficult to find on Gotland. This makes those stones still standing a valuable archaeological resource for studies. This section will look at the landscape of the sites of the picture stones, followed by an analysis of the context of archaeological finds near those stones and what these things can mean when forming a pattern for the Viking Age picture stones.

Buttle änge

Buttle änge is an archaeological site in the Parish of Buttle on the island of Gotland. Seen today, it is the location of two original placement Viking Age picture stones at a present-day farmstead: Buttle änge I and Buttle änge II (Figure 5.1). Extensive excavations have been done at this meadow and pasture site recently and from these excavations much has been learned about in situ picture stones.



Figure 5.1 Buttle änge I and II in situ.
(Photography by Spears 2014)

Landscape Discussion

Buttle änge I and II are situated adjacent to a pre-historic road with the stones facing north towards it. Anders Andreef, an archaeologist in Gotland, states: “The larger picture stone is 1.85 m wide at the foot and rises 3.85 m above the ground surface making it Gotland’s tallest picture stone of the later type... The adjacent picture stone is 2 m tall and 1.67 m wide at the foot, though it may have been taller, since the top is damaged and it has signs of breaking” (Andreef 2014:680). In the surrounding areas there are also Early Iron Age building foundations, as well as a variety of cemeteries ranging from Iron Age and Viking Age.

The pre-historic road is one of the major ancient roads of the Lojsta Hajd forest area, the third largest uninterrupted forest in Sweden. The road ran from Buttle Parish to Etelhem Parish to the south (Andreef 2011:137). Archaeological excavation of the road revealed organized groups of stone, purposely placed which suggests that the road was once paved (Andreef 2015:3).

The Early Iron Age foundations are found around the picture stones to the northeast. The three foundations have been dated to the Iron Age (300-800 AD) based upon finds inside and outside of the stone foundation walls. As an example, one of the foundations measured 22x12 m in a north-south direction, with wall thickness of 3 m (Andreef 2015:3,12).

The burial mound found consisted of cremation graves with Viking Age finds, see Figure 5.2 (Andreef 2015:30). These graves are west of the stones, based on the stones facing north and located 20 meters west of the stones. There are also present cemeteries in the vicinity as well. The graves found were scattered cremation graves, probably

disturbed by the shift to farmland in the Medieval Period, which is supported by discovering stoneware dating to 13-1400 AD (Andreef 2015:98, 2014:681).



Figure 5.2 Burial Mound at Buttle änge. After Andreef 2015:45.

Context Analysis

Buttle änge has a variety of finds in different contexts, including within the picture stones, as well as at the Iron Age foundations. Those finds at the picture stones will denote that these items were purposely placed there and had a meaningful connection to the stones. Those finds from the house foundations provide dates, as well as a big picture for this site.

Those items found at the base of the picture stones include: charcoal, animal bones, and pottery (Måhl 1990:23). The pottery is described as thick and black ceramic (Lindqvist 1942:38). Their location is firmly noted at the foot of the stones according to Lindqvist and Måhl's publications. Later excavations "[a]bout two metres south behind the larger picture stone a 15 cm depth pit with dark thick soil, charcoal, cremated bones and a few metal artefacts, including part of a javelin from the Late Vendel period or of

Early Viking Age type. In the same area, but outside this deposition, finds of bronze and glass beads were also made” (Andreef 2014:681-2).

Fröjel Stenstugu

Fröjel Stenstugu is located in Fröjel Parish just at the border of Klinte Parish and is the site of an in situ picture stone of the Viking Age standing 1.97 m high and 1.06 m wide, as seen in Figure 5.3. Fröjel is also the location of a Viking Age harbor which was a major port of trade.



Figure 5.3 Fröjel Stenstugu stone in situ. After Andreef 2014:676.

Landscape Discussion

To the north of the picture stone sits an old road, which, when in use, runs between Fröjel church and Klinte. The stone also sits very near the current parish boundary of Fröjel and Klinte. The surrounding area also features pre-historic buildings,

grave mounds, and cairns. The pre-historic buildings, including house foundations and a hill fort, cairns, and gravemounds found at this site have very sparse information, but they are present. The house foundation, which has been removed, was estimated to date to the Early Iron Age (Måhl 1990:23). The pre-historic road consisted of a compact stone filling topped with flat limestones. There were ruts from cart wheels found on the limestone surface, as well as horse shoe nails (Andreef 2014:675, 2011:131-133).

Context Analysis

A small pile of rocks was found at the base of the picture stone; mixed with those rocks was cremated animal and human bone. A small pit was then found, which contained a higher concentration of the cremated bone. These animal bone fragments included domesticated pig, dog, cattle and seal. Of these bones the dog and seal were cremated at a very high temperature, while the others were unburned or only partially burned. The human bone “consisted of parts of the cranium and limbs belonging to at least one individual”, and was carbon dated to the 9th century (Andreef 2014:678). Also found with this cremated bone was a wealth of artifacts.



Figure 5.4 Button shaped bronze mount from Fröjel Stenstugu. After Andreef 2011:134.

The artifacts included: “... iron objects comprised of nails, rivets and an arrowhead. Bronze objects included various mounts, a belt buckle, a strap end mount and a button-shaped mount with animal art ornaments. These bronze objects may have been attached to leather straps. A spindle whorl of red quartz was also among the finds” (Andreef 2014:677). The button shaped mount can be seen in Figure 5.4. Based upon typology the artifacts date to the Late Vendel period or Early Viking Age, and this corresponds with the group the picture stone is allocated to. These artifacts were found mixed with the bone and are interpreted as being part of the cremation grave deposit.

Visne ängar



Figure 5.5 Visne ängar stones. (Photography by Douthitt 2014)

Visne ängar is the most unusual of the three sites used for this chapter. Present at this site are not two, but three picture stones: one from Group B, and two from Groups C/D (Figure 5.5). A distinction cannot be made between C and D for the group because of the state the picture stones were found in. Little is known about this site due to a lack of publications, therefore, much of what is to be discussed and analyzed is based upon

my own work at the site in the summers of 2013-2015. My work included detailed mapping of features, as well as photographing and mapping the picture stone fragments. The classification of the stones into group B and Groups C/D is based upon my personal interpretation of my work with those fragments, and an example of the mapping for that project is seen in Figure 5.6.

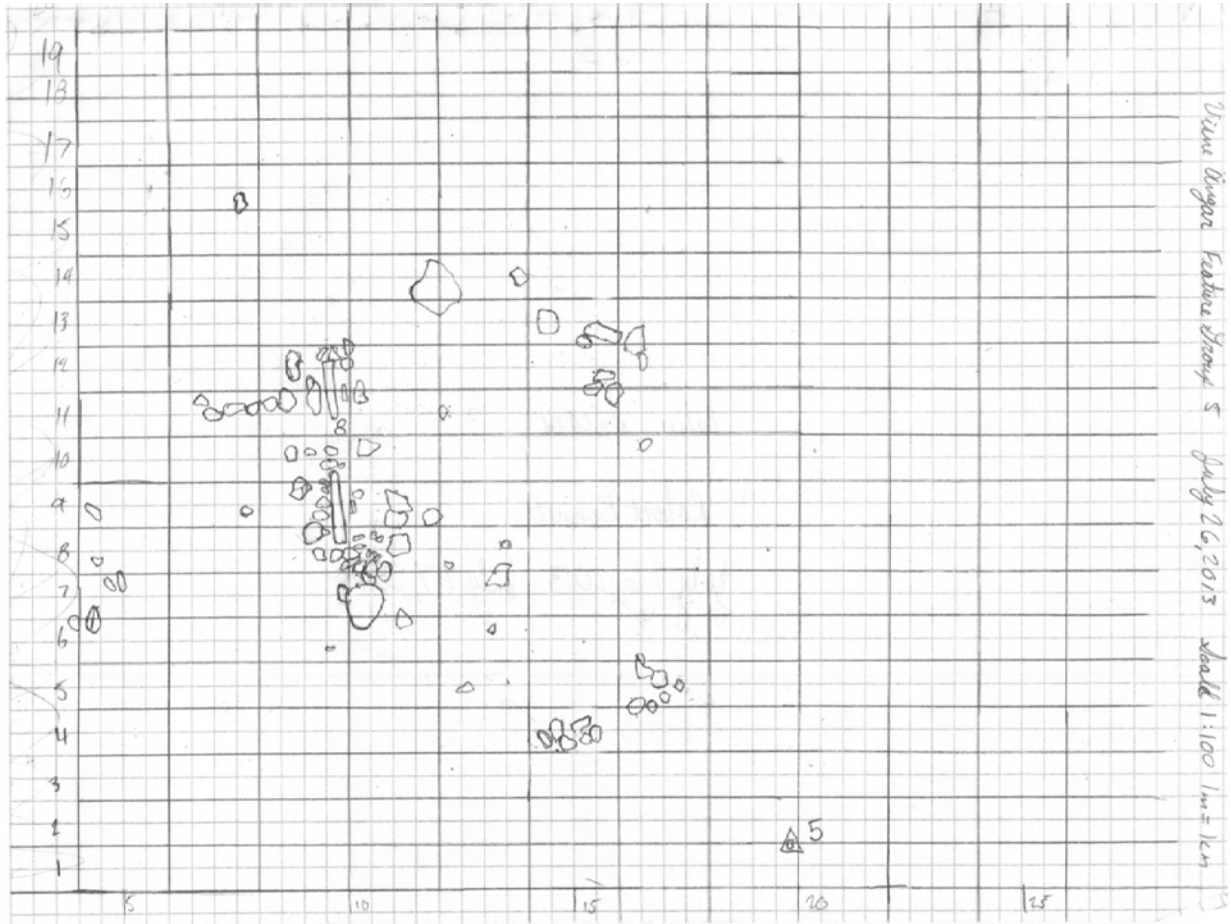


Figure 5.6 Map of Stone fragments

Landscape Discussion

The landscape of Visne ängar today is surrounded by fields, but the main area of the site has been left as grazing land. Found at Visne ängar are six Iron Age house foundations and a large central grave mound with small mounds around it. The picture stones are set at the center of the site, surrounded loosely by house foundation walls, with

the grave mounds farther away atop a hill (Figure 5.8). The closest house foundation is the largest house, which is roughly twice the size of the other foundations (Figure 5.7). Also present at Visne ängar is a pre-historic road running in front of the stones (Måhl 1990:22).



Figure 5.7 Feature Group 4, house foundation.
(Photography by Spears 2013)



Figure 5.8 Feature Group 3, grave mound.
(Photography by Spears 2013)

Context Analysis

An archaeological excavation of the area around the picture stones was done in 1973 by Monica Wennersten. Though this excavation was never published in full, the finds were reported in a short article in the *Gotländskt Arkiv*. Two cremation graves were found nearby the stones, and the finds of those graves were extraordinary. Inside one of the graves were two gold foils with gripping beast ornamentation, while the other contained a bronze harness bow crest (Andreef 2011:131).

Gotland Analysis

The interpretation of the landscape features relies on the meaning found in things such as roads, foundations, and graves. These stones are very large scale, and very visible. When looking at a map, the stones would have been easily visible from the pre-historic roads all of these stones are found near. This visibility from the road suggests that the images carved on the stones would have been recognized by their outside audience. The reason for these stones being near roads could be as a boundary. The road at Buttle änge is at the Lojsta Hajd forested area, these stones may have marked out a boundary for that area and let travelers know that they were entering the forest (Andreef 2011:137). Alternatively, these stones could have denoted ownership for those who lived on this land.

The proximity of the Iron Age foundations with the picture stones could denote their use as a property marker. All of the stones were found near Iron Age house foundations, so they must all therefore have a connection to these houses, and their close proximity to the houses tells me that those who lived there would have had a hand in their erection. The stones date to the same time period as the houses, so I suggest that they

were indeed raised by those who lived there. Using a comparison of hoarding behaviors, which was extremely prevalent on Gotland, as an example, hoards are thought to have given “legitimacy to the land by becoming part of the discursive knowledge of the people who lived in this particular area” (Hedeager 2011:173). The raising of picture stones seems to be another medium with which the people gave legitimacy to their land by memorializing the entire family line.

The presence of cemeteries, gravemounds, and cairns near these stones is compatible with the presence of house foundations because those who lived were likely to have died there, and needed a place to be buried. The burial place situated near a picture stone ties the stones to death. Though they are not within a clearly delineated cemetery, as with the earlier stones, the later stones of the Viking Age are close to that location (Varenius 2011:46-47). The houses and cemetery/burials present at the stones represent a connection to the whole kinship group.

The context of finds for these stones tells that cremation graves are commonly found at the foot of Viking Age picture stones along with some sort of other artifact. It is important to note that the bodies of the deceased were not cremated at that location, but were deposited there after the fact. The location of the find at the foot of the picture stone is very meaningful. It was deposited there purposefully, as the people contemporary to the stones chose to place their dead at that location. That choice, and the subsequent presence of the cremation grave, gives those stones a connection with death and memorials.

The choice of artifact, and in the case of Fröjel Stenstugu the other animal cremation, which is deposited in this context provides further insight. For something to

be deposited in the ground means it is taken out of circulation. When that deposit is in a location near another object which took great expenditures of work to create means the objects found ought to be important. This is true for the artifacts, other than human cremation graves, found at the foot of picture stones.

Animals are often found in Viking Age burials as sacrifices to the dead person; I extend this interpretation to the Gotland picture stones. For Buttle änge the finds included animal bones and pottery, the charcoal being from the burning of the animal. For Fröjel those animal bones consisted of a wide variety of animals like seal, cow, domestic pig, and dog. Seals are not found in Gotland, so that animal must have been retrieved through trade, which would be easy near the Viking port of Fröjel. The find of an unusual animal at this site gives credence to its location near the port, as well as a sign of wealth for the grave itself. The other animals are those that were extremely valuable during that time and also found in Viking burials. Common grave animals were buried with an exotic animal, cremated and deposited with a human cremation grave in context with a stone monument. This monument therefore has an important connection with death and the rituals of death portraying wealth.

The variety of the other items found with the cremations in context with the stones, does not follow a pattern. They vary from pottery to different metals with no commonality found at the stones in material items. Those items which are found were deposited, once again, by choice. I propose that those artifacts were deposited because they were of importance to the person with whom it was buried. It is human nature to want to take the important or symbolic things with us, because of this I believe the same is true of these cremation grave artifacts. This makes the picture stones more personal in

meaning, and lends the interpretation of them being stones to memorialize the death of a person.

This interpretation can be strengthened when looking at the artifacts found in burials which tell archaeologists what that person did or what their gender was. A warrior will be buried with his sword, bow, axe, etc., a horseman will be buried with his horse and the horse full outfitted to ride, a woman will be buried with pottery and jewelry, and a child would be buried with their toys. These are the artifacts found which an archaeologist uses in context to interpret graves, which is exactly what I suggest be done with these cremation graves.

Looking at the shift from a cemetery landscape to a combination of roads, house foundations, and graves landscape portrays a shift in need. The stones are still close to graves, so they are still a part of a death/memorial ritual, but they are also now near roads and house foundations, so they have importance within this new context. I believe a combination use is necessary for this interpretation.

Based on the artifacts found I have interpreted the stones as having a direct connection with death through the cremation graves, as well as a connection with memorializing a person with the possibility that other artifacts found could have had personal importance or meaning. Based upon the landscape there is also a connection with the people who lived in the surrounding house foundations as well as with their dead. Landscape and Context together speak to a memorial purpose and a connection to death. But the landscape also points to a connection with those people and the outside world through the proximity of roads. That these memorial death stones are visible from the road, and based on the effort and cost it takes to create a picture stone, means they

were meant to be seen. Those who went by on that road were supposed to know that people lived there and were well established enough to have their dead there, and not have to fight off land disputes. Based on this evidence, I believe the picture stones were erected because of a specific person, the grave at the foot of the picture stones, but are meant to memorialize the kin group buried in the cemeteries nearby, who probably lived in those house foundations.

In summary, the landscape of the Gotland picture stones speak to a relationship with the people who lived in the Iron Age foundations they are found near, because they were more than likely erected by those same people to honor their dead and solidify their ownership of the land through a permanent structure memorializing their kin group in the cemeteries. The context of the finds at the Gotland picture stones are related to death because of the cremation graves found at the foot of the stones. These graves are also personalized by the finding of inconsistent, valuable objects with those graves, meaning that person could have been the reason for which the stone was raised.

Chapter 6: Results and Interpretation

The results of this study feature conclusions and interpretations of iconography, landscape, and context. These aspects of the study have all been discussed, but the results need to be concise and organized. This will be done by summarizing what was found in this thesis.

Iconography Analysis

The iconography analysis was done using the frequency of the variables and motif analysis. The frequency of the variables shared which images appeared most often, and therefore, were an important part of the stones. The frequency also assisted in showing what variables mostly appeared together on the stones; this helped delineate motifs to be analyzed and assigned a meaning.

When looking at the stones there is an overall higher frequency of battle/war related imagery. Such as warriors, weapons, and battle scenes. This puts a high significance on battle and war as an important motif. This motif of battle and war relates the stones to death due to the high likelihood of death when fighting in a battle. The higher frequency of males versus females was also determined to represent the fact that men had to go out and make a name for themselves in order to earn respect. This would have been done by going out to fight, or going out to trade. Ships were also shown in high frequency on the stones, and have a previous death connection in the form of stone ship settings found in the early Iron Age, which has been carried over to a new medium on the stones.

A larger motif for the stones is that seen in the Odinic Formula. Odin is a god of death, associated with battles and Valhalla. He is shown riding Sleipnir greeted by a

Valkyrie offering a drinking horn, a Welcome Scene. The two different Welcome Scenes were a motif analyzed to have a shared interpretation of a Valkyrie welcoming warriors, or a warrior, to Valhalla, a heaven realm for the Vikings, after they died. Valkyries are death related imagery because of their association with Odin, but also because of their association with battles and the dead. Sleipnir is a death related image because of his association with Odin, the god of the fallen. Together Odin, Sleipnir, and Valkyries make up a formula for identifying Odin on the stones, and thus giving the stones an association with death.

These conclusions about the meaning of the images and motifs come together to assign the stones a meaning as death related due to their iconography. That which is shown on monuments represents what the meaning of it is. For the Gotland picture stones that meaning/purpose is death.

Landscape and Context Analysis

All of the stones examined for their Landscape features were found near the following elements: pre-historic roads, Iron Age foundations, and graves. This sets up a formula for expected locations to find picture stones. The meaning behind these elements has been interpreted as well. Pre-historic roads could mark land boundaries or natural feature boundaries for those who own the land they are erected on, resulting in a declaration of ownership visible to the roads. The Iron Age foundations are occupied by those who erected the stones, perhaps to memorialize the former owners and declare inheritance of the property. The graves are a continuation of early Iron Age traditions of erecting picture stones near the dead on Gotland. The stones for the Viking Age, which is during the late Iron Age, are found slightly further from the graves, but near them

nonetheless. The meaning of the house foundations and the graves all point to an interpretation of the stones as death related monuments, but the road does not.

The context of finds at the stones includes a relationship to death based on what is found. At all three stone sites a cremation grave and burial goods were found at the foot of the stone and nearby. The burial goods vary, from exotic and food based animal cremations, a blackware bowl, and bronze and silver objects. This variety has been determined to represent personalized grave goods, objects which had personal significance of some kind to the deceased of the cremation grave.

Comparison with Gotland Picture Stones

The image motifs of the Swedish rune stones, while featuring similar motifs, are extraordinarily different. The Swedish rune stones are not laid out panels, they are intricate knots of text which sometimes feature simplified line drawings of Gotland motifs. The horse and rider, as well as the men fighting are two of the shared motifs, but when you look at them they are from a different perspective not just profiles carved in relief, but at angles and from behind carved with lines. This is a huge stylistic difference, which to me speaks to the difference in these two stone traditions.

There are key and obvious differences between these stones, which delineate these stones from being a visible shared tradition of stone monuments. The Gotland stones feature panels of organized images that tell a story/show specific scenes without inscriptions, while the Swedish rune stones are twisting knots of inscriptions sometimes featuring images though with no discernable organization. These differences make the stones distinct from each other.

However, I see a lot of similarities when it comes to the landscape of the stones. They are found at farms, ancient sites and burials, and roadways, the same as in Gotland. This allows me to apply the same Landscape conclusion I found from the Gotland stones to these Swedish stones: they are related to those people whose farm they are erected at because they were raised by those people to memorialize their dead and solidify property ownership. More importantly, the inscriptions found on the Swedish rune stones fully support that conclusion.



Figure 6.1 Group E Gotland rune stone from Sjonhem kyrka. (Photography by Spears 2013)

One major similarity which has not been mentioned, or are included as a part of this study, can be seen in Group E Gotland stones. The Group E stones are essentially

Swedish Runestones, with the twisting imagery filled with runic inscriptions of the Younger Futhark. There appears to be a slight difference in the style of the runes, but this has been interpreted as a regional flair for Gotland (Källström 2011:122). The formula of “X raised this stone for Y” remains constant in the Gotland stones. The reason for this sudden switch, which begins in 1000-1100 seems to be the appearance of Christianity beginning in 1020 AD (Roesdahl 1998:166). This date corresponds with the dates assigned to the Group E stones, and the shared tradition would take a turn to religion upon the arrival of the more organized religions is copasetic. Upon reaching Gotland and seeing that these people also have a stone tradition it makes sense that missionaries would encourage an identical tradition which had worked so well in the conversion of mainland Sweden.

This similar yet different interpretation of the Swedish rune stones compared to the Gotland picture stones is an example of regional differences for a shared tradition of stone monuments. Amongst rune stones there are regional differences between Denmark and Sweden, as well as between Uppland and other parts of Sweden. I propose that the Gotland picture stones are yet another regional variation of stone traditions which serve a similar purpose and meaning. That purpose overall being memorializing the dead and that meaning being entirely related to death.

Chapter 7: Conclusion and Implications

The results from this study of iconography, landscape, and context are manifold, and combine to uphold Hypothesis 2: The Viking Age Gotland picture stones were used as death memorials because of their death related criteria of iconography, physical location/landscape, and archaeological context. The Viking Age Gotland picture stones were used as death memorials because of their death related criteria of iconography, physical location/landscape, and archaeological context.

The majority of iconography found on the picture stones of the Viking Age has a relationship with death, and can therefore be defined as death iconography. These images extend their definition to the picture stones overall with their Battle Scenes, greetings from Valkyries, and Odinnic appearances. While there are images which do not carry a definition of death, they are few comparatively. Disregarding the myths which may or may not be present on the stones, to the individual images and their basic meaning and frequency reflecting death is the conclusion of the iconography study.

Similar conclusions can be drawn from the landscape and archaeological context of finds of the picture stones. Two out of the three locations picture stones are found near denote death, Iron Age house foundations and graves, while roads do not. This still allows the majority to rule over the interpretation that the Viking Age picture stones are death monuments. The archaeological context of finds suggest the same. The finds include grave goods and cremation graves, all relating to death. Those grave goods include: sacrificed animals, blackware pottery, horse trappings, and bronze bow crest. The graves show no distinct pattern to the grave goods, so they are interpreted as goods which had meaning to the individual.

Though they are relating to the individual who is deceased through the personalization of the grave goods found. The personalization is determined to be part of the memorial to the deceased, and the position of the stones near Iron Age house foundations and cemeteries connect the stones to those who lived in the houses and at that location for the long term. This long term presence at that site connects the stones as memorials to the dead of multiple generations, representing a memorial to the kin group itself, which may have been instigated by the death of that one person, making the stones death memorials.

Looking at the Gotland stones comparatively to the Swedish rune stones, they are extraordinary. The Gotland stones stand out iconographically with their variety compared to the rune stones, which are very formulaic. They do, however, share a purpose: death memorial monuments. The Swedish stones have runic inscriptions telling who the stones were for and by whom they were raised. The Gotland stones and Swedish stones are parts of a shared stone tradition to raise large stones for the dead, at their farms and graves. While showing some differences from typical shared traditions, the originality of the Gotland stones being an example of regional differences of shared traditions.

Implications

The Gotland picture stones of the Viking Age are striking examples of death memorials in the form of stone monuments. They are unique, beautiful memorials which have provided decades of research for scholars like myself. My hope for this study is that it will offer a formula for examining monuments or objects that can be used by others in their own studies, as well as spark differing opinions from my own to renew the interest in the Gotland picture stones. Archaeology can be the key to opening doors and providing

more information on the Gotland picture stones. While there are not many still in their original position, those which are could give so much. Without discussion and investigation of the possibilities and new ideas there is no continuation of interest, and that would be tragic. These stones are monuments which have fascinated for centuries, and will continue to do so.

Works Cited

Andreeff, Alexander

2011 "Archaeological Excavations of Picture Stone Sites": Gotland's Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp. 129-144. Visby: Fornsalen Publishing, Gotland Museum.

Andreeff, Alexander, and Dan Carlsson

2001 Bildstenen från Fröjel: port till en glömd värld.

Andreeff, Alexander, and Victor Niels Love Melander

2015 Rapport från arkeologisk undersökning vid Buttle Änge 2014: Raä Buttle 42: 1, 42: 2, 43: 1, 43: 2, 43: 3 och 145: 1, Nygårds 1: 28, Buttle sn, Gotland.

Andreeff, Alexander, and Rich Potter

2014 Imaging picture stones: Comparative studies of rendering techniques: Med hjärta och hjärna: En vänbok till professor Elisabeth Arwill-Nordbladh. Göteborg: Institutionen för historiska studier, Göteborgs Universitet.

Andrén, Anders

1993 Doors to other worlds: Scandinavian death rituals in Gotlandic perspectives. *Journal of European Archaeology* 1(1):33-56.

2011 "From Sunset to Sunset. An Interpretation of the Early Gotlandic Picture Stones": Gotland's Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp. 49-58. Visby: Fornsalen Publishing, Gotland Museum.

2013 Places, Monuments, and Objects: The Past in Ancient Scandinavia. *Scandinavian Studies* 85(3):267-281.

Barrett, James H

2008 What caused the Viking age? *Antiquity* 82(317):671-685.

Bill, Jan

2012 “Viking Ships and the Sea” *The Viking World*. Brink, S., ed. Pp. 170-180. New York: Routledge.

Brink, Stefan

2012 “Who Were the Vikings?” *The Viking World*. Brink, S., ed. Pp. 4-7. New York: Routledge.

Brown, Nancy Marie

2012 *Song of the Vikings: Snorri and the Making of Norse Myths*: Macmillan.

Bugge, Alexander

1909 The Origin and Credibility of the Icelandic Saga. *The American Historical Review* 14(2):249-261.

Carlsson, Dan

2009 “Owner Missing? The Hoard, the Farm and the Community”: *The Spillings Hoard-Gotland’s Role in Viking Age World Trade*. Pettersson, A.M., ed. Pp.65-107. Visby: Fornsalen Publishing, Gotland Museum.

2013 *Animal Bones of Paviken I*. The Gotland Archaeological Field School.

Crumlin-Pedersen, O., Hirte, C., Jensen, K., and Möller-Wiering, S.

1997 *Viking-age ships and shipbuilding in Hedeby/Haithabu and Schleswig*. Schleswig: Archäologisches Landesmuseum der Christian-Albrechts-Universität.

Geertz, Clifford

1973 *The Interpretation of Cultures: Selected Essays*. New York: Basic.

Gräslund, Anne- Sofie

2012 “The Material Culture of Old Norse Religion” *The Viking World*. Brink, S., ed. Pp. 249-256. New York: Routledge.

Grundy, Stephan

2014 *Miscellaneous studies towards the cult of Óðinn*. New Haven, CT: Troth Publications.

Guðmundsdóttir, Aðalheiður

2011 “Saga Motifs on Gotland Picture Stones. The Case of Hildr Högnadóttir”: *Gotland’s Picture Stones: Bearers of an Enigmatic Legacy*. Karnell, M. H., ed. Pp.59-71. Visby: Fornsalen Publishing, Gotland Museum.

Guðmundsdóttir, Aðalheiður, and Jeffrey Cosser

2012 *Gunnarr and the Snake Pit in Medieval Art and Legend*. *Speculum* 87(4):1015-1049.

Hauck, Karl

1978 *Brakteatenikonologie Reallexikon der germanischen Altertumskunde*. Ed. Johannes Hoops. Vol. 3. Berlin: de Gruyter, 1978. 367-401.

Hedeager, Lotte

2011 *Iron Age myth and materiality: an archaeology of Scandinavia AD 400-1000*: Routledge.

Helmbrecht, Michaela

2011 “‘A Man’s World’. The Imagery of the Group C and D Picture Stones”: *Gotland’s Picture Stones: Bearers of an Enigmatic Legacy*. Karnell, M. H., ed. Pp. 83-90. Visby: Fornsalen Publishing, Gotland Museum.

Hultgård, Anders

2012 “The Religion of the Vikings” The Viking World. Brink, S., ed. Pp. 212-218. New York: Routledge.

Ilves, Kristin

2009 Discovering Harbours? Reflection on the State and Development of Landing Site Studies in the Baltic Sea Region. Journal of Maritime Archaeology 4(2):149-163.

Imer, Lisbeth M.

2011 “The Viking Period Gotlandic Picture Stones. A Chronological Revision”:
Gotland’s Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp. 115-118. Visby: Fornsalen Publishing, Gotland Museum.

Jansson, Sven B.F.

1987 Runes in Sweden. Stockholm: Gidlund.

Lamm, Jan Peder

2011 “Exploring Gotland’s Picture Stones. The pioneer Scholars and Their Successors”:
Gotland’s Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp. 23-32. Visby: Fornsalen Publishing, Gotland Museum.

Lindkvist, Thomas

2012 “The Emergence of Sweden” The Viking World. Brink, S., ed. Pp. 668-674. New York: Routledge.

Lindqvist, Sune

1941 Gotlands Bildsteine. 2 vols. Volume 1. Stockholm: Wahlström & Widstrand.

Måhl, Karl Gustaf

1990 Bildstenar och stavgardar–till frågan om de gotländska bildstenarnas placering.
Gotländskt arkiv 62:13-28.

Moore, Jerry D.

2009 Visions of Culture: An Introduction to Anthropological Theories and Theorists. 3rd ed. Lanham, MD: AltaMira.

Ney, Agneta

2011 “The Welcoming Scene on Gotlandic Picture Stones, in Comparison with Viking Period and Medieval Literary Sources”: Gotland’s Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp.73-82. Visby: Fornsalen Publishing, Gotland Museum.

Nylén, Lamm and Jan Peder Lamm

1988 Stones, Ships, and Symbols. Stockholm: Gidlunds Bokförlag.

Oehrl, Sigmund

2011 “New Iconographic Interpretations of Gotlandic Picture Stones Based on Surface Re-Analysis”: Gotland’s Picture Stones: Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp.91-106. Visby: Fornsalen Publishing, Gotland Museum.

Östergren, Majvor

2009 “Spillings- The Largest Viking Age Silver Hoard in the World”: The Spillings Hoard- Gotland’s Role in Viking Age World Trade. Petterssom, A.M., ed. Pp.11-40. Visby: Fornsalen Publishing, Gotland Museum.

Page, RI

1992 Scandinavian society, 800–1100: the contribution of runic studies. Viking society centenary symposium 14–15 May: 145-159.

Peel, Christine

1999 Guta saga: The history of the Gotlanders. London: Viking Society for Northern Research, University College London.

Price, Neil

2004 The archaeology of Seiðr: circumpolar traditions in Viking pre-Christian religion. *Brathair* 4(2):109-126.

2012 “Dying and the dead: Viking Age mortuary behavior”: *The Viking World*. Brink, S., ed. Pp. 257-273. New York: Routledge.

Roesdahl, Else

1998 *The Vikings*. 2nd ed. London: Penguin Books.

Rotan, Edgar

2015 *The Esoteric Codex: Wöden*. Lulu.com.

Sawyer, Birgit

1993 *Medieval Scandinavia: From conversion to reformation, circa 800-1500*: U of Minnesota Press.

2000 *The Viking-Age rune-stones: custom and commemoration in early medieval Scandinavia*: Oxford University Press, USA.

Schiffer, Michael B.

Archaeological Context and Systemic Context. *American Antiquity* 37(2):156-165.

Sjöswärd, Ulla, Karnell, M. H., & Sjöblom, K. G.

2012 *Guta Saga: The tales of the Gutes*. Visby: Gotlands museum.

Skoglund, Peter

2008 *Stone Ships: Continuity and Change in Scandinavian Prehistory*. *World Archaeology* 40(3):390-406.

Stoklund, Marie

2006 *Runes and Their Secrets: Studies in Runology*. Copenhagen: Museum Tusculanum Press.

Sturluson, Snorri

1990 *Poems of the Elder Edda*. Philadelphia: University of Pennsylvania Press.

2005 *The Prose Edda*. J. Byock, transl. London: Penguin Group.

2008 *The Poetic Edda*. L.M. Hollander, transl. Austin: University of Texas Press.

Swanton, Michael J.

1998 *The Anglo-Saxon Chronicles*. New York: Routledge.

Varenius, Björn

2011 "Picture Stones as an Opening to Iron Age Society": *Gotland's Picture Stones:*

Bearers of an Enigmatic Legacy. Karnell, M. H., ed. Pp. 41-48. Visby: Fornsalen Publishing, Gotland Museum.

Westholm, Gun

2009 "Gotland and the Surrounding World": *The Spillings Hoard- Gotland's Role in*

Viking Age World Trade. Petterssom, A.M., ed. Pp.109-152. Visby: Fornsalen Publishing, Gotland Museum.

Widerström, Per

2009 "Spillings Farm- The Home of a Rich Viking in the Northeast of Gotland": *The*

Spillings Hoard- Gotland's Role in Viking Age World Trade. Petterssom, A.M., ed. Pp.41-63. Visby: Fornsalen Publishing, Gotland Museum.

Williams, Gareth

2012 "Raiding and Warfare" The Viking World. Brink, S., ed. Pp. 193-203. New York:
Routledge.

Ilves, Kristin

2009 Discovering Harbours? Reflection on the State and Development of Landing Site
Studies in the Baltic Sea Region. Journal of Maritime Archaeology 4(2):149-163.

Sperber, Erik

1989 The weights found at the Viking Age site of Paviken, a metrological study:
Fornvännen.

Noonan, Thomas S.

1992 Fluctuations in Islamic Trade with Eastern Europe during the Viking Age. Harvard
Ukrainian Studies 16(3/4):237-259.