



LUNDS
UNIVERSITET

A Coin for the Afterlife

Charon's Obols in Viking Age Scandinavia?

By

Hanna Emgård Ryberg

Master's Thesis in Historical Archaeology

Department of Archaeology and Ancient History

Lund University

Spring 2018

Supervisor: Fredrik Ekengren

Examinator: Ingrid Gustin

Abstract

Emgård Ryberg, H. 2018. *A Coin for the Afterlife. Charon's Obols in Viking Age Scandinavia?* Lund University, Department of Archaeology and Ancient History.

The Obolus tradition, the placing of a coin in the grave, appeared in the Germanic area during the Roman Iron Age. This tradition originated in the Greek mythology where it was meant as payment to Charon for the ferry transport across the river Styx to the afterlife. However, between the 5th and 8th centuries this tradition seems to be discontinued in Scandinavia, to later be reintroduced during the Viking Age. This reintroduction took different forms and was, according to Anne-Sofie Gräslund (1967) linked to trading contacts with the Byzantine Empire.

In this study the following questions were explored: How is the Obolus tradition expressed in Scandinavia during the Viking Age and is there a correlation between the reintroduced Obolus tradition and Christianity? What can such a correlation, or lack thereof, say about the Obolus traditions religious symbolism during the second wave?

To contrive this, the distribution of coins in Viking Age graves were investigated through case studies of Hedeby and Birka. To manage this, Gräslund's (1967) article was used as an antecedent alongside Holger Arbman's (1943a) grave index from Birka, Ute Arents and Silke Eisenschmidt's (2010a) index of Hedeby and Fredrik Svanberg's (2003) index over southern Sweden.

The conclusion drawn was that the use of coins as grave goods greatly differed between the western and eastern parts of Scandinavia possibly due to their different proximity to the Christian regions. It is a probability that the reintroduction of the ritual was brought by Christians. However, do to the great variety it is not likely that the ritual has a religious Christian meaning but rather a purely symbolic ritualistic one.

Keywords: Obolus, Scandinavia, Viking Age, Coins, Grave Goods, Birka, Hedeby

My thanks to Fredrik Ekengren and Ingrid Gustin for their great help driving this thesis forward.

Contents:

1. The Obolus Tradition: A Brief History.....	4
1.1 Aim and Research Question.....	5
1.2 Theory, Method and Material.....	5
1.2.1 Theoretical background.....	6
1.2.1.1 The importance of Materiality.....	6
1.2.1.2 The Significance of Context.....	7
1.2.1.3 The Theory of Intersectionality.....	8
1.2.1.4 The Christianisation Process in Scandinavia.....	9
1.2.1.5 A View of Rituals.....	9
1.2.2 Method and Material.....	10
1.3 Source Criticism and Representativity.....	11
2. Research Background.....	12
3. Coins as Grave Goods	14
3.1 Birka.....	15
3.1.1 An Overview of the Grave Material with Coins.....	16
3.1.2 Coins in their Contexts.....	20
3.1.2.1 Coins in Pouches.....	20
3.1.2.2 More than one coin.....	21
3.1.2.3 One coin or less.....	30
3.1.3 Coins Found in Birka.....	46
3.1.4 Summary.....	48
3.2 Hedeby.....	49
3.2.2 Summary.....	54
4. Discussion and Conclusion	56
Summary.....	63
Bibliography.....	65
Appendix.....	71
Appendix 1: Coins in Graves in Southern Sweden.....	71
Appendix 2: Catalogue of Coins in Graves in Birka.....	73
Appendix 3: Catalogue of Coins in Graves in Hedeby.....	85

A Coin for the Afterlife

Charon's Obols in Viking Age Scandinavia?

By Hanna Emgård Ryberg

The Ancient Greeks believed neither in heaven nor hell, but still believed in a life after death. The underworld, Hades, was divided into several possible worlds, Erebus, Tartaros and the Elysian Meadows. But most importantly, one had to adhere to the correct rituals to be granted entrance and for Charon to ferry one across the river Styx (Morales, 2011, p. 67).

According to the contemporary literary sources the Charon's fee was a ritual use of an obol, "an ancient Greek coin worth one sixth of a drachma" (Ekengren 2009, p. 179), placed in the mouth of the deceased at the time of death, as payment for the ferryman Charon (Stevens, 1991, pp. 216). These literary sources are comprised by both Greek and Roman authors during a period stretching from the fifth century BC to the second century AD.

This tradition became wildly spread and can be found in the Greco-Roman world from 500 BC to 500 AD from whence it spread to the Germanic territories beyond the borders of the Empire with sporadic findings from the Early Roman Iron Age and onwards. This tradition has come to be known as the "Obolus tradition", a term that later came to stand for the practice of giving coins as grave goods (Grinder-Hansen 1991, p. 215). In the Germanic area, the tradition is by researchers mainly associated with a social elite as the tradition was brought back by mercenaries returning from the Roman army who, with their networks, created a common mortuary practice (Stevens 1991, pp.215, 223; Ekengren 2009, pp. 182)

However, the practical embodiment of the tradition does not necessarily exist

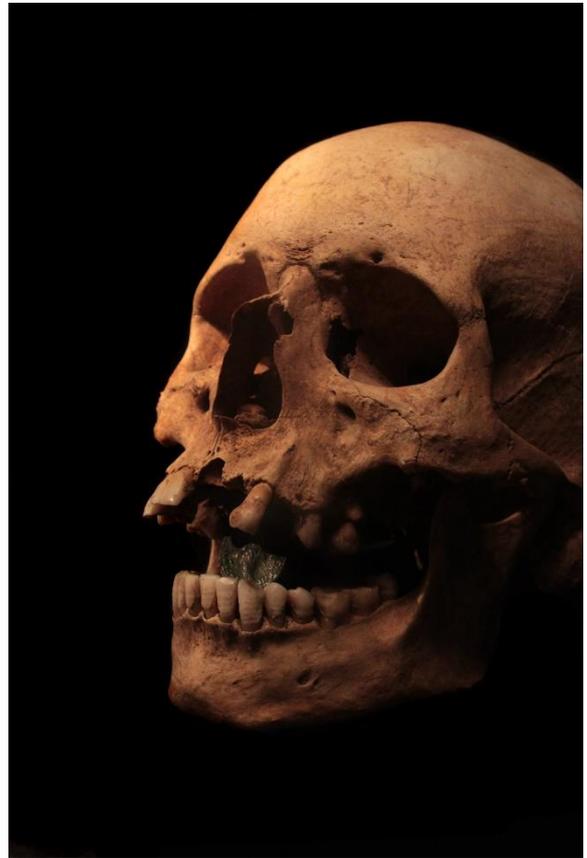


Fig 1: Roman skull with an obol in the form of an Antoninus Pius dupondius. Photo by Falconaumanni (CC BY-SA 3.0).

solely in the way the literary sources describe, the archaeological record exhibits a variation in the value of the coins and their placement in the graves (Stevens 1991, pp. 215, 225; Ekengren 2009, p. 181).

According to Gräslunds' article "Charons mynt i vikingatida gravar", the archaeological record indicates that the tradition went extinct during the Vendel period, only to get revived in eastern Scandinavia during the Christianisation period, due to trading contacts with the, then Christian, Byzantine empire (Gräslund, 1967, pp. 174, 175, 178). Based on non-remodelled coins, she draws the conclusion that the Obolus tradition is extended into the Christian medieval period and all the way into the 19th century (Gräslund 1967, p. 175). These findings would signify that the tradition at some point was separated from the classical myth from which it originated (Stevens, 1991, p. 226).

1.1 Aim and Research Question

This investigation is an attempt to further contribute to the discussion about Charon's obols in Scandinavia through the aim of investigating the Obolus tradition during the Viking Age with Gräslund's article "Charons mynt i vikingatida gravar" (1967) as an antecedent. The intention is to explore if the "second wave" of the Obolus tradition truly was an Obolus tradition in the religious sense. Further the intention is to examine if there existed a difference between the ritual use of coins as grave goods in the eastern contra western Scandinavia. In order to accomplish this the focus is placed on inhumation graves and in addition coins used as pendants were examined since these coins may have a symbolic meaning.

The research questions for this thesis is as follows: Was the use of coins as grave goods in Scandinavia during the Viking Age an expression of the Charon's obol and were there a potential correlation between the reintroduced Obolus tradition and Christianity? What can such a correlation, or lack thereof, say about the religious symbolism of the Obolus tradition during the second wave?

1.2 Theory, Method and Material

There were several potential problems going in to this project. Firstly, coins are often

considered in terms of their monetary value and in the trade context. Secondly, the use of an object and its placement can mean different things at different times (Hodder 2012, p. 18). In this thesis however, I attempted to move beyond these problems which meant that the context was of utter importance, both in terms of placement, quantity and relation to other grave goods.

1.2.1 Theoretical Background

The important theoretical concepts for this study include materiality, context and intersectionality. In order to understand the effect the coins could have had on the individual, both the deceased, the funeral participants and the historical society at large, the theory of materiality need to be considered. In the studied grave material these coins have a relationship both to the deceased and to the other grave goods as well as purely geographical relationships, and in order to analyse this complexity context is crucial. As part of the contextual study the theory of intersectionality is important in order to examine all the aspects of the grave material to understand the holistic image of the grave goods and the people involved.

1.2.1.1 The Importance of Materiality

The term “Materiality” emphasises the importance of the material for the creation and use of an object, as well as the inherent symbolism that may exist in their processes and functions (Hurcombe 2007, p. 112). These processes are necessary for the creation of the object which is always affected by humans. Therefore, there exists a strong co-dependency between objects and humans as described by Hodder (2012). Humans and their social realms are utterly dependent on objects to the extent that one may question the human existence without them, and they in return, are dependent on a broader social context in order to receive a function (Hodder 2012, p. 3, 16). This means that the materiality of the material culture constitutes a pivotal aspect of the social character and behaviour of the object itself since the materiality can determine such things. The material is therefore crucial for the creation of human relations and their perception of the object, which leads to objects ability to mean different things to different people; even to archaeologists, causing them to study different objects in different ways (Hurcombe 2007, p. 109; Hodder 2012, p. 18). In the act of identifying with and rejecting objects, culture and social differences are created. Not only do we as humans

own these objects, but we are in turn owned by them, by their beauty, colour or enclosed memories. This leads objects to being associated with history, memory or power. In turn this leads to relationships between humans and objects, causing the object to convert into a thing with which humans claim exclusive connection (Hodder 2012, pp. 23). Different materials with similar functions may therefore express different social qualities such as glass and ceramics (Hurcombe 2007, pp. 109). However, materials and objects can always be relied upon to be contextually dependent and significant, incorporated in specific networks and social relationships. They are therefore active participants in social processes and having their own biographies (Hodder 2012, p. 33). Therefore, to be able to understand society, one must understand things, and to understand things one must understand the material, its properties, its origin, its relations and symbolisms (Hurcombe 2007, p. 114).

1.2.1.2 The Significance of Context

Artefacts consists of multiple elements, these elements are comprised of practical function, social function and symbolic meaning. The form, function and symbolic meaning are culturally created and therefore contextually dependent (Vandkilde 2000, pp. 13, 21), which leads to that the meaning of the artefact can be analysed by the method of studying objects in their original context. Material culture can thus be summarised as the bearer of meaning and the context as the creator of meaning. However, the context is a relative term which can be expanded or limited depending on the research question (Vandkilde 2000, p. 11).

This means that function and symbolic or religious meaning do not necessarily have to be opposites but may be two sides of the same coin (Vandkilde 2000, p. 11). It is the active and dynamic potential, role and attributes which is referred when discussing the practical function, social function and symbolic meaning. However, these elements are not directly related to the physical form of material culture (Vandkilde 2000, pp. 21).

Practical function refers here to the utilitarian purpose of material culture, which is primarily based on form, while the social function refers to the object's ability to express cultural identities and social categories (Vandkilde 2000, p. 22). The symbolic meaning of objects is less tangible but at least as important. The material culture has more than just utilitarian and social uses, it also reflects cultural ideas. Objects can thus not be divided into active areas such as practical, social or religious (Vandkilde 2000, pp. 24, 39).

Though not always apparent, objects also have their own stories, social lives,

identities and recontextualizations since they have a different temporality than humans (Vandkilde 2000, pp. 28; Hodder 2012, p. 6). This ability to change "identity" combined with its integrity is a relevant spectrum in the work of individual objects and manifestations (Vandkilde 2000, pp. 28f).

1.2.1.3 The Theory of Intersectionality

Since the individual rarely can be understood by only one factor, intersectionality is a method through which human complexity can be analysed (Collins and Bilge 2016, p. 11). The definition of intersectionality is the study of social identities in relation to each other (arkeologi n.d.). Since the different identities, that make up a person, are valued and central within intersectionality as the combination which make them unique (Collins and Bilge 2016, p. 90). The individual's social identities are based on intentional differences in the expressing of affinity with specific groups (Díaz-Andreu and Lucy 2005, p. 1; Chenoweth 2009, p. 335). These social identities consist of inter alia; ethnicity, gender, sexuality, occupation, religion, class and age (Díaz-Andreu and Lucy 2005, p. 9). The essence of intersectionality's usability is that the different social identities such as class, sex, occupation and age are not exclusive entities but based on each other (Collins and Bilge 2016, p. 13). For example, identity is a continuous process consisting of active choices (Díaz-Andreu and Lucy 2005, p. 1; Chenoweth 2009, p. 335) such as the religious identity which is crucial to the human perception of it-self and the world (Díaz-Andreu and Lucy 2005, p. 11; Edwards 2005, p. 114). Which means that these identities have a vital role for the individual's behavior and political affiliations (Collins and Bilge 2016, p. 92). All of these identities are interconnected, resulting in the complexity of social and societal analyses. Intersectionality is therefore a method that is complex in and of itself but sorely needed since, within archaeology, the social identities have previously been focused upon only one at a time (Díaz-Andreu and Lucy 2005, p. 9; Collins and Bilge 2016, p. 30).

1.2.1.4. The Christianisation Process in Scandinavia

The Christianising process in Scandinavia began in the 700s with Bishop Willibrord's visit to Jutland and continued by Archbishop Ebo in 823 (Bæksted 1986, p. 245). Together with the Danish king Harald Klak Ansgar traveled from Mainz to Denmark where he was active until 827. From there he was invited to mission in Birka but return to Denmark around 850 (Roesdahl 1998, p. 159).

In spite of this, the missionary work in Denmark was not truly commenced until 936 with Archbishop Unni, the baptism of Harald Bluetooth 965 and the establishment of Knut the Great's Church in the year 1016 (Staecker 1999, p. 97). Christianity spread from west to east, more bishops were established even though the process was interrupted by pagan reactions in Norway and Sweden. Archbishop Unni traveled to Birka in the 930s to continue the church's work and with the baptism of Olaf Skötkonung 990, the true missionary work in Sweden was commenced and culminated in 1050 (Roesdahl 1998, pp. 159; Staecker 1999, p. 97). In Norway, it appears that Christianity was established around the year 1075 (Nordeide 2011, pp. 279).

The exclusion of Norway in this study is based on Ansgar's missionary work in Scandinavia. Ansgar focused his missionary work at the major trade centers Birka, Hedeby and Ribe where established or visiting Christians already existed (Roesdahl 1998, p. 159). Hedeby was chosen in this study instead of Ribe based on the fact that they are placed in the same geographical area, and the fact that Hedeby at this point has been further excavated.

1.2.1.5 A View of Rituals

Svanberg argues that the grave traditions of the social elite were primarily superregional, whereas the traditions of the ordinary man were limited to relatively small geographical areas and human groups. Therefore, there exists an overwhelming diversity in practice that can only be understood by detailed analysis (Svanberg 2003a, pp. 142).

An obvious problem in the study of grave rituals is the "western" view of religion as an entity in vacuum, separate from the profane. A division which exists in all aspects of the "western" world view (c.f. Ingold 2000). A theoretical aspect separated from the practical world (Svanberg 2003a, p. 143). Even the religion is divided into two parts according to the western view. The practical – the religious manifestation and the theoretical –

religious conviction, where the theory is considered superior (Svanberg 2003a, p. 144).

To circumvent these problems, religion needs to be studied in a different way. According to Catherine Bell (1992), the following four entities should be included in the analysis; (i) Situational - The majority of religious elements have to be contextually studied in order to be understood; (ii) Strategically - a tactical and efficient system that is always beneficial; (iii) Misrecognition - that is, an inaccurate limitation of its possibilities and relationships, purpose and means; (iv) Agency's motivational dynamics - The willingness to act is intimately associated with the other above-mentioned functions and through that it can recreate an image of the order of power in society (Bell 1992, pp. 81). Of course, the practice does not reflect a holistic image of the religious world. These four elements constitute only the practical ritual act (Svanberg 2003a, p. 145). This means that one need to focus on ritualization, c.f., as discussed in *1.2.1.3 Intersectionality*, how specific social actions strategically differ from others to express identity. Ritual actions are therefore frequent but not universal conscious strategies (Svanberg 2003a, p. 146).

The conclusion drawn from this is that every placement of a coin has a purpose, however different at times, they are consciously and strategically placed.

1.2.2 Method and Material

In order to answer the aforementioned research questions, a qualitative, comparative case study of coins as grave goods during the Viking Age in Birka and Hedeby was executed, based on Arbman (1943a) *Birka I. Die Gräber. Text*, and Arents and Eisenschmidt (2010a) *Die Gräber von Haithabu. Band 1: Text, Literatur*. The case studies of Birka and Hedeby were chosen based on Gräslund's (1967) conclusion that the eastern and western Scandinavia differed from each other and the fact that these trading places were equal in importance and missionary relevance.

A qualitative case study focuses on insight, discovery, and interpretation more than hypothesis tests of specific phenomenon. This can lead to new understanding or new discoveries regarding relationships and concepts (Merriam 1994, pp. 24, 25, 27).

The method distinguishes itself by focusing on contextual analyses which means that the knowledge derived is tangible instead of abstract and theoretical (Merriam 1994, pp. 25, 28).

Case studies can be descriptive as well as heuristic and inductive. Meaning that the

description of the studied phenomenon is complete, showing an extensive complexity and the full amount of factors affecting it (Merriam 1994, pp. 26). The study can improve the reader's understanding, create new meaning or confirm in an exemplary and concise way. The contextual information can create generalisations, concepts and hypotheses (Merriam 1994, pp. 27). For all these possibilities and reasons, qualitative case study-methodology have been chosen for this thesis.

Based on the above, qualitative case studies can be defined as immersive, complete descriptions and analyses of a lone phenomenon (Merriam 1994, p. 29). This means that the case study-methodology is well suited for the aims of this study. This context-based approach allows for a closer examination of materiality by analysing the individual coins and their intersectional relationships.

In addition, to incorporate the bigger picture to the analysis a quantitative summary of coins as grave goods in southern Sweden from Svanberg's (2003b) catalogue in *Decolonizing the Viking Age 2*, was used as a complement in order to investigate if there truly was a difference between western and eastern Scandinavia and not a local phenomenon limited solely to Birka and Hedeby.

The focus of the study lay on coins as grave goods in inhumation graves and their location and placement relative to the body in order to analyse the possibilities of these coins being Charon's obols. This decision was based on the fact that the placement of coins in inhumation graves are easier to analyse than in cremation graves. Additionally, there is a possibility to view some of the ritual aspects in the inhumation graves since all rituals are strategical.

Gräslund (1967) omits coins used as pendants in her article, however, I chose to include these coins in the study in order to examine if they affect the holistic distribution pattern. If the distribution of pendants was as wide spread as the other coins these could be part of the Obolus tradition as well.

1.3 Source Criticism and Representativity

The focus lay on the inhumation graves since the aim was to conduct an analysis of the coin's location relative to the body. Therefore, the potential displacement of the coins caused by the decomposition of the body and other natural and cultural disturbances caused by taphonomy

or bioturbation was taken into account as a possible margin of error. In the choice of focusing on inhumation graves I do not exclude the possibility of the use of Charon's obols in cremation graves only my own ability to adequately analyse them.

Furthermore, I decided to add coins used as pendants in this study since it is indicated that these coins could have a different meaning separated from commerce. This fact could possibly alter the holistic image.

Additionally, this study consists of a qualitative case study, which has been criticised as not being able to develop general statements and theories on the basis of specific case studies (Flyvbjerg 2003, p. 186). This could create a limited picture which might provide a local pattern rather than a holistic view of the practice. It was for this reason that Southern Sweden was chosen as a drop scene, to counter the risk of creating purely local hypotheses.

2. Research Background

The Obolus tradition has long been present throughout Europe though it originated in the Greek mythology. Both Greek and Roman contemporary authors wrote about this tradition between 500 BC and 500 AD. The literary sources mention Charon's obols as an obol placed in the mouth of a person at the time of death in order to pay Charon the ferryman from Greek mythology (Stevens 1991, pp. 215, 227). The archaeological material gives a more varied view of the use of coinage as grave goods during this period. There is a wide variation in placement and material of the coins found within graves and the tradition does also appear in areas where Charon has not been part of the prevailing religion. However, the sources mention that the belief in Charon was widespread throughout the Roman Empire and at least ten different ancient authors mentioned the Obolus tradition in relation to grave goods at funeral rituals (Stevens 1991, p. 224; Thüry 1999, p. 23). Though, according to the literary sources, there were also contemporary groups who did not believe in or worship Charon. Joachim Gorecki (1976) who studies the tradition in the Roman empire and provinces points out the great variety of placements of coins in graves and that all of them probably were not Charon's obols. He further questions the worshipping of Charon in the Roman empire and believes that different coin placements, such as in pouches or with eyelets, should be interpreted separately such as jewelry or amulets, grave gift to the dead, or as the personal belongings of the dead. Günther E. Thüry (1999) argues that the literary sources indicate that

the belief in and worship of Charon did not just exist in the Roman empire but was even widespread, however, he does agree that one coin placed in the mouth is required in order for it to be interpreted as a Charon's obol. Susan T. Stevens (1991), on the other hand, agrees with Gorecki, that the interpretation of the coins is much too complex to automatically be interpreted as Charon's obols and instead draws the conclusion that the tradition centers around the shared belief in the power and importance of money as a way of communicating with the afterlife, rather than around the belief in Charon.

From the Greco-Roman area the Obolus tradition spread in the 3rd century to Germany and northern Scandinavia and during the 4-5th century to Norway and Gotland and occur in combination with Roman goods (Bemmann 2005, p. 37; Lund Hansen and Rindel 2008, p. 144). For example, in the Öresund area nine graves with Charon's obols have been found dated to the late Roman Iron Age. The Obolus tradition in these cases encompassed objects such as glass and gold pieces placed in the mouth of the deceased. Additionally, a few uncertain cases of the Obolus tradition has been found in Scania dated around the 5th century AD. Jan Bemmann (2005) who has studied this period concludes that the coins have been imported from the Roman provinces. He means that coins in Scandinavia and central Germany under the 3rd century was used by the elite and that the coins in these regions had received other meanings such as an indicator of rank, which also can be seen from the spread of gold coins in these graves. Ulla Lund Hansen and Per Ole Rindel (2008) have studied the nine graves where the Obolus tradition occur in the Öresund region and conclude that the buried individuals belong to the elite of the society. This conclusion, just like Bremmann's, seems at least in part to be based on the presence of precious metals and imported Roman vessels.

During the late Roman Iron Age, the Obolus tradition spread eastward as well by the Germanic tribes beyond the Roman border to the Hungarian lowlands and southern Russia, that is, in the contact areas between the late Roman population and the Germanic population (Steuer 1970, p. 146). It is in this area that Heiko Steuer (1970) differ from other researchers by studying the typology and chronological structures of the gravesites by studying Charon's coins, among other things. Michael Odenweller (2015) continues on Steuers idea to use the occurrence of Charon's Obols in order to study other aspects of society, by studying the occurrence of Obols in Germany as a sign of Christianity in the 6th century. He concludes that this tradition seems to have been reinterpreted during the 6th century to signify Christianity. Odenweller bases this conclusion on the Christian symbols on the coins from this period and later the adoption of gold leaf crosses as Charon's obols.

According to Gräslund (1967) the Obolus tradition was used sporadically well into the 19th century from which she backtracks and concludes that Charon's obols is reintroduced in Scandinavia during the Viking Age after a period during the Vendel period, in which this tradition went missing from the archaeological record. She further concludes that the tradition was stronger in eastern Scandinavia than in western Scandinavia during the Viking Age since few findings were made in Norway, occasional finds in Denmark and several in Finland. Gräslund draws the conclusion that this spread emphasises a network which indicates an ample contact with the Byzantine Empire.

3. Coins as Grave Goods

The return of the ritual use of coins in the grave context is complex at best and completely void of a logical pattern at its worst. However, it is a subject which has intrigued many scholars and still there is no consensus regarding interpretation.

Few of the individuals in the grave material in Birka and Hedeby have been osteologically examined and sex can therefore not be discussed in this study.

The possibility to study intersectionality was in this study limited and therefore focus was placed on grave-type, orientation, status, dating and other grave goods. In an attempt to analyse the different hierarchal tendencies in the selected graves the AOT-method (Antal Oldsags Typer) was chosen in an attempt to standardise the analysis. The status of the graves was based on the method of analysing the amount of different grave goods found within the grave, since objects in themselves cannot define a grave as rich if it does not contain other objects at the same time, i.e. gets a high AOT-value (Hedeager 1990, pp. 103; Ringstedt 1998, p. 169). The purpose of the method is to eliminate the local and regional differences in the composition of the grave goods. The amount of different types of grave goods is supposed to mirror the social status of the dead. It is a rough method, but it enables a comparison between different grave types such as grave-pits, coffin graves and chamber graves (Hedeager 1990, pp. 103; Ringstedt 1998, p. 169). However, the AOT-method is problematic to use on Christian graves since so called "true" grave gifts (for example vessels, weapons and animals) did not coincide with the Christian ideas as it indicates a belief in a corporeal life after death (Gräslund 1980, p. 84). Though, this did not mean that items could not be found in Christian graves in Birka in the form of objects pertaining to the apparel of the

dead. Which meant that the deceased was simply buried in their clothes. This tradition was widespread within both low- and high-status spheres within Christianity, however, graves with only items belonging to the worn clothes could also have been pre-Christian (Gräslund 1980, p. 84).

The location of the coins in this study was based on the notes and Hjalmar Stolpe's plan drawings found in Arbman (1943a) *Birka I. Die Gräber. Text* and notes and the plan drawings found in Arents and Eisenschmidt (2010a, 2010b) *Die Gräber von Haithabu*. When no skeleton was present in the plan drawings the placement was based on the relation to the other grave goods. In the very few cases where no skeletal was found and only few artefacts were present the coins placements were based on key items such as oval brooches or knives as well as the proportions of the grave, but in most such cases notes have been made by Arbman (1943a) or Arents and Eisenschmidt (2010a, 2010b).

The graves in Birka have only been dated to the Viking Age, while Arents and Eisenschmidt (2010a) have been able to date the graves in Hedeby more closely.

3.1 Birka

The trading centre of Birka was located on the small island of Björkö and was founded around the year 750 AD. The strategical location of Birka connected it to Denmark with trading routes along the Swedish coast, passing Öland making it the most important trading place in the eastern part of central Sweden at the time. As an important trading center goods from all over Scandinavia, Western Europe, the Caliphate and the Byzantine Empire has been found in the grave material. Among other things, furs from Sapmi, glass, Rhineland ceramics, clothing and textiles including Chinese silk and Byzantine embroidery can be found. Population estimates made for Viking Age Birka have been measured to between 500-1000 people. Around the year 975 AD the political power was transferred from Birka to Sigtuna and the trading activities in the Baltic Sea area were transferred to Gotland (Price et al 2018, pp. 19).

Out of the more than 3000 known graves to exist in Birka (Hedenstierna-Jonson 2017, pp. 1) around 1100 (commonly known as 1166 graves) have been excavated by Hjalmar Stolpe (Arbman 1943a, vorwort) during the 19th century, but Birka has been excavated in different stages since the 17th century and onward (Price et al 2018, p. 21; historiskamuseet n.d.). The many researchers that have treated and studied the material since the first excavations until

today has created inconsistencies regarding seven of the graves in this study (511, 642, 716, 840, 979, 1125B and 1131) (c.f. Arwidsson 1989, pp. 137; historiskamuseet n.d.). In Arwidsson's (1989) compilation these graves are listed as containing coins, though, the same graves do not contain coins according to Arbman (1943a). However, since according to Birka Portalen these seven graves did not contain coins, they are not included in the following analysis (historiskamuseet n.d.).

Out of the 1166 excavated graves 115 contained finds of coins (Arwidsson 1989, pp. 139). Based on Arbman's catalogue (1943a), 88 of the 115 graves were inhumation graves, which constitutes the focus of this study (see table 1).

	Graves in total	Cremation	Inhumation
Coins	115	27	88

Table 1: the distribution of coins in the Birka material based on Arwidsson (1989) and Arbman (1943a).

The coins in these 88 inhumation graves consisted of a variety of materials; one or two were made of gold, a few of bronze, but the majority of the coins are made of silver. Furthermore, the coins in the grave context were found in an assortment of places such as; on or close to the head, on the chest or upper body (sometimes as pendants), in the middle of the grave by the hip or beneath the pelvis, under the feet, apart from the body, in a bag or in a casket, but it appears that no coin was placed in the mouth.

3.1.1 An Overview of the Grave Material with Coins

In order to understand and adequately analyse the Birka material, an hourglass-shaped model has been applied. Namely, starting with broad and diverse information, to narrow down with the specific issue of the work at hand, and broadening out with results and interpretations in to a holistic image.

<i>Inhumations with coins</i>	<i>Grave-pits</i>	<i>Coffin graves</i>	<i>Chamber graves</i>
88	13	31	44

Table 2: the distribution of coins in the different types of inhumation graves based on Arbman (1943a).

Firstly, an overview was needed. The material chosen for this study consist of 88 inhumation graves comprised of three different grave-types: Grave-pits, Coffin graves and Chamber graves. The differences in status have been based on the aforementioned “Antal Oldsags Typer”-method in combination with the grave type in this study. Both coffin graves and chamber graves have been interpreted as a sign of status, within both Christianity and during the pre-Christian Viking Age (Lund 2013, p. 54). This status seems not to be assigned to the grave-pits.

Grave-pit: AOT= 1-10(12). Coffin grave: AOT= (1)3-13. Chamber grave: AOT= (4)9-36. In short, this means that the grave-pits contained between 0-10 different kinds of artefact with one exception, which contained 12 kinds of artefacts. The coffin graves contained between 3-13 different types of grave goods with one exception which contained only one artefact and the chamber graves contained 9-36 kinds of artefacts with one exception which contained 4 types of artefacts. As can be seen based on the AOT-values a pattern emerges which indicates that the grave-pits with their lower AOT-value seems to be lower status graves in general, compared to the coffin graves and chamber graves which based on the AOT-values indicates rich graves with higher statuses. This can be further argued as coinciding with the Christian practice of separating the body from the soil (Lund 2013, p. 54). Though, even if grave-pits can contain items to such affect, such as coal or bark as a separation layer these can arguably be seen as indicating a lower status than the use of coffin or chamber graves. However, the possibility that a grave-pit could be a high status Christian grave cannot be excluded.

The distribution of the coins as seen in table 2 above indicates a practise which encompasses all the different sections of society, even though the division of percentage is hugely partial towards the chamber graves: 39,6% of the 111 chamber graves, 15,3% of the 202 coffin graves and 6,2% of the 209 excavated grave-pits. The fact that coins were present both in graves with low and high AOT-values as well as in different grave types is a strong indicator that the placement of coins in graves were not merely associated with status as suggested in the first wave.

<i>Placement</i>	<i>Grave-pits</i>	<i>Coffin graves</i>	<i>Chamber graves</i>	<i>Total*</i>
<i>Head</i>		2	2	4
<i>Chest area</i>	7	21	24	52
<i>Waist area</i>	2	5	8	15
<i>Feet</i>			6	6
<i>Other defined placements</i>	2	2	8	13
<i>Not mentioned in the description</i>	2	2	3	5

*The totality of placements were 95 since some graves contain coins in more than one place.

Table 3: The distribution and placement of coins in the different types of graves based on Arbman (1943a).

The 13 grave-pits in this study shows that the “low status” graves are underrepresented but that middle- (31) and high status (44) were commonly combined with coins as grave goods. However, in every one of these different segments of society, the most common placement where firstly on the chest and secondly by the waist (see table 3).

However, of these 88 graves, 23 are high status graves containing weapons and/or equestrian equipment (cf. Hedeager 1990, pp 136; Jibbefors 2015, pp. 55; Hedenstierna-Jonson et al. 2017, pp. 2). The placement of the coins in the graves varies equally in the different grave-types. Except a significant majority of coins placed in the chest, no other discernible pattern is apparent (see table 4).

<i>Coin placement</i>	<i>Weapon grave</i>	<i>Equestrian equipment grave</i>	<i>Weapon & Equestrian grave</i>	<i>Total</i>
<i>Head</i>	2			2
<i>Chest area</i>	2	1	5	8
<i>Waist area</i>	1		3	4
<i>Feet</i>	2		3	5
<i>Other</i>	4	1	1	6
<i>Not Mentioned</i>	1			1

Table 4: The distribution and placement of coins in different high-status graves based on Arbman (1943a). The placement of “other” encompasses placements such as: to the left of the body, between the legs, between the bodies, in the corner of the grave and by the legs.

The study of the chosen material has shown that three categories of coins were found:

fragmentation, one coin, and more than one coin. The table below therefore shows the average quantity found at the different places in the grave. =1 symbolises the amount of one coin. <1 symbolises the amount of less than one coin. >1 Symbolises a bigger amount than one coin (see table 5).

<i>Coin value</i>	<i>Head</i>	<i>Chest</i>	<i>Hip/ pelvis/middle</i>	<i>Feet</i>	<i>Not mentioned</i>	<i>Other placements</i>
=1	1	6	2	1	1	3
<1	5	24	8	2	1	8
>1	0	18	5	3	2	1

Table 5: The division of the quantity of coins placed in different places in the graves based on Arbman (1943a). The placement of “other” encompasses placements such as: to the left of the body, between the legs, between the bodies, in the corner of the grave and by the legs.

In the table above (table 5) six different placement areas have been studied. In four of these areas, “the head”, “the chest”, “the waist” and “other placements” a majority of “less than one coin” have been found. In the two remaining areas, “the feet” and placements “not mentioned” by Arbman (1943a), “more than one” coin have been found. The first of these areas, by “the feet”, the coins were generally found in leather pouches. The second “area” was the coins not mentioned in Arbman’s (1943a) catalogue and is therefore not possible to analyse.

3.1.1.2 Summary

The lack of clear patterns at this stage both regarding the placements of the coins, as well as within the ranging AOT-values indicates that a closer contextual analysis is needed. The majority of coins were found on the chest which indicate some meaning, even though many coins were placed elsewhere. Also the AOT-value and the grave types were too varied to indicate a particular status of the graves in which coins were found. Table 5 shows that the three coin-categories found consisted of one coin, fragmented coins and more than one coin. However, in order to analyse the possible symbolic meanings of the coins the three coin-categories analysed in this study consists of: (i) coins in pouches, (ii) more than one coin in a placement, and (iii) one coin or less in one placement. This decision to study these three coin-categories was based on the fact that coins in pouches was recurring, and one coin and less

was combined within the same category since both fragmented and single whole coins have been interpreted as Charon’s obols in both literary and archaeological sources.

3.1.2 The Coins in their Contexts

Several of the 88 graves contain more than one coin, and their placement and manner incite different interpretations. The three categories: (i) coins in pouches, (ii) more than one coin, and (iii) one coin or less which appeared in the Birka material was divided in order to be more closely investigated.

3.1.2.1 Coins in Pouches

In 25 cases pouches containing coins were placed in the graves at varying locations and at least 18 of them also contained other personal items, such as weights, keys and beads. Most likely this means that the coins in the pouches was used for payments. This conclusion is also strengthened by the grave types in which the pouches are present. 15 out of the 25 graves containing pouches with coins were of a higher status. It seems therefore, that the presence of pouches has more to do with accessibility or wealth than anything else. It consequently gives the impression that these coins did not express the traditional ritual symbolism of Obolus coins.

For this reason, coins placed in pouches will be removed from the category of potentially symbolic or ritual coin placements.

<i>Coin placements</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Total</i>
<i>Head</i>		<i>1</i>	<i>2</i>	<i>3</i>
<i>Chest</i>	<i>4</i>	<i>17</i>	<i>21</i>	<i>42</i>
<i>Waist</i>	<i>1</i>	<i>3</i>	<i>4</i>	<i>8</i>
<i>Feet</i>			<i>2</i>	<i>2</i>
<i>Other</i>	<i>2</i>	<i>4</i>	<i>2</i>	<i>8</i>
<i>Not Mentioned</i>	<i>2</i>	<i>1</i>	<i>3</i>	<i>6</i>
<i>Total</i>	<i>9</i>	<i>25</i>	<i>31</i>	<i>65</i>

Table 6: The distribution and placement of coins not in pouches in the different types of graves based on Arbman (1943a).

The placement “other” encompasses placements such as: by the knee, left of the body, between the legs, between the bodies, in the corner of the grave and by the legs.

This leaves 65 inhumation graves since some of the 25 graves coins placed in pouches, did also contain coins in other placements. Of the remaining coin placements, 66% were found on the chest (see table 6).

Furthermore, the remaining coin finds should be divided in two different groups of study since they probably mean different things: finds of “one coin or less” in one placement, and “more than one coin” in one placement. However, one grave could belong to both these categories since they could have more than one placement of coins, i.e. ¼ of a coin on the chest (first category) and three coins by the waist (second category).

3.1.2.2 *More than one coin*

The division between the grave-types (see table 7) and their inherent social indication, in which more than one coin is present in the same location, could indicate available resources. Meaning that the individuals in these graves for one reason or another had several coins available, potentially indicating capital.

<i>Placements of coins</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Total</i>
<i>Head</i>				
<i>Chest</i>	2	3	9	14
<i>Waist</i>		2		2
<i>Feet</i>				
<i>Other</i>			2	2
<i>Not Mentioned</i>				
<i>Total</i>	2	5	11	18

Table 7: The distribution and placement of more than one coin not in pouches in the different types of graves based on Arbman (1943a). The placement “other” encompasses placements such as: not near the body, between the legs, between the bodies and in the corner of the grave.

To further analyse this group of coins, the 18 graves in question were divided into different sub-groups. These groups were divided based on coin placement, cardinal orientation and grave-type. These categories for the division have been so chosen based of the coin placements possible importance, the possible religious indications of the cardinal orientation

and the possible difference in status of the grave types.

Group (I):

The first group consist of two grave-pits with coins placed on the chest.

Grave	Eyelets	Oval brooches	Brooch/clasp	Knife	Beads	Pendants	Scissors	Key	Weights	Spur	Polishing stone
646	x	x	x	x	x						
835	x	x	x	x	x	x	x	x	x	x	x

Grave 646: was a grave-pit created in a NW-SE orientation. Based on the AOT-method the grave contained three kinds of grave goods. These goods were located by the individual's chest area, and mostly consisted of items belonging to the clothing, including two oval brooches. In the grave two Scandinavian coins (Carolus/hus, Malmer CEII/hus; båt/tuppar, Malmer A2/- (Malmer 1966, p. 279; Arwidsson 1989, p. 139)) with eyelets, were also found. These were placed partly under an equal-armed brooch, between the clavicles.

Grave 835: based on the AOT-method, this W-E oriented grave-pit, contained twelve different kinds of grave goods. On the chest were items such as oval brooches and jewellery as well as scissors and a knife found. Further down in the grave, by the right side of the legs, were 2 weights and a three-sided iron spur placed and in the right upper corner were a quarter of a polishing stone from raw glass found. The two coins found in the grave were an Arabic samanid dirhem dated to 911/912 for caliph Isma'il minted in Andarabah and a Hedeby coin with Jelling ornament (hjort/strålansikte, Malmer B1/A2 (Malmer 1966, p. 279; Arwidsson 1989, p. 140)), both with eyelets. The coins were found on the chest of the individual.

These two graves did not have much in common, besides being grave-pits with coins in the chest area of the individual.

Group (II):

The following two graves were both chamber graves encompassing two individuals each. In these graves the coins were found between the individuals which in Arbman (1943a, pp. 221,

253) was interpreted as one male and one female in each grave, oriented in the NW-SE direction.

Grave	Oval brooches	Clasp	Beads	Embroidered	Whetstone	Knife	Sword	Spearhead	Shield	Weight	Fire steel	Battle knife	Axe	Buckles	Handle	Beaker	Mirror	Game	Arrows	Scissors	Vessel	Box	Pouch	Stirrups	Bit	Awl	Comb	Hammer	Flint	Bucket	Fitting	Nails	Finger ring	Ring pin	Ring needle
644	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				
731	x	x	x	x	x	x	x	x	x										x	x	x	x	x										x	x	x

Grave 644: was a weapons chamber grave containing two individuals, oriented NW-SE.

Based on the AOT-method contained 35 kinds of artefacts.

In the middle of the grave were skeletal parts from two individuals. The individual closest to the north-eastern part had items belonging to female attire on what seems to be the chest, and to the right of the other individual were weapons, stirrups and a clay pot among other things. In the northern corner were game pieces, arrowheads and a spearhead found. In the western corner was remnants of a wooden bucket and a bronze pot.

The six Arabic (Abbasidian and Samanidian) coins in the grave were dated 749-833, 892, 908/09 and 920/21 and was placed between the two individuals in leg height.

Grave 731: this double chamber grave with an NW-SE orientation contained 17 different kinds of artefacts, based on the AOT-method. In the drawing, no skeletal remains are seen but based on the placements of the grave goods the individuals seem to have been placed in the middle of the grave. Both individuals had gold head-bands and one oval brooch each on what seems to be the chest. By their heads were a sword and a shield buckle placed, and by the feet were arrowheads, a spearhead, a second shield boss and a leather pouch.

The coins in this grave consisted of five Arabic coins (one Umajjad and four Samanidian) and one English coin, dated between 723-924. Three of the coins were placed in chest height between the individuals and three of the coins were placed in the small pouch by the feet.

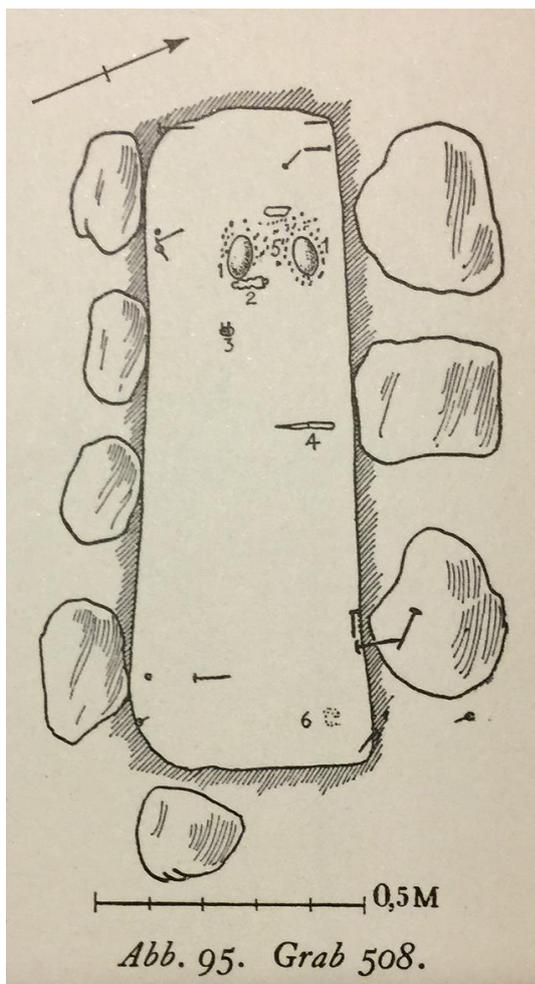
Group (III):

The following two graves are the only ones in this category with multiple coins placed by the waist.

Grave	Clasp	Knife	Beads	Oval brooch	Pendant	Ribbon	Nails	Fitting	Ring
58	x	x	x		x	x	x	x	x
508	x	x	x	x					

Grave 58: was a coffin grave with a W-E orientation. Apart from the items found in the grave, not much else is known. The artefacts seem to have been placed in the chest area and based on the AOT-method, there were eight different kinds of grave goods. The 10 fragments of three Arabic coins found in this grave, were located in the middle of the grave, probably by the waist area and was dated around 800-990 (Arwidsson 1989, p.140).

Grave 508: this coffin grave had a WNW-ESE orientation. Based on the AOT-method, four different kinds of artefacts were found, among them two small oval brooches from the Carolingian empire. On the chest lay also a bronze clasp and what could have been a bead necklace, several more beads were also found by the feet. In this grave two Scandinavian Hedeby coins (hjort/strålansikte, Malmer B1/A1 (Malmer 1966, p. 278; Arwidsson 1989, p. 139)) were placed to the right, by the waist (see Fig 2).



necklace, several more beads were also found by the feet. In this grave two Scandinavian Hedeby coins (hjort/strålansikte, Malmer B1/A1 (Malmer 1966, p. 278; Arwidsson 1989, p. 139)) were placed to the right, by the waist (see Fig 2).

Fig 2: Blueprint of grave 508 (Arbman 1949a, p. 149).

Group (IV):

The majority of the graves contained coins placed in the chest area, in order to simplify, these have been divided according to the grave orientation. The three graves in this group were oriented SW-NE or NW-SE.

Grave	Beads	Knife	Vessel	Weight	Pendant	Buckle	Ring	Comb	Whetstone	Sword	Axe	Arrows	Shield	Embroidery	Game	Pin	Clasp	Fire steel	Flint	Spur	Key
86II	x	x	x	x	x	x	x	x	x												
524	x	x	x						x	x	x	x	x	x	x	x					
738	x	x	x														x	x	x	x	x

Grave 86II: based on the AOT-method, this coffin grave 86II contained ten kinds of artefacts most of which are placed between the neck and the waist. The artefacts are very varied: iron weight, amber pendant, a bead and a knife among other things. On the chest area of the SW-NE oriented individual were placed two Arabic coins dated around 890-930.

Grave 524: was a NW-SE oriented weapons chamber grave. No skeletal is seen in the drawing, which means that the placements are based on their interrelations. At the top of the grave was two shield bosses, beneath which was a gold headband and by the probable left hip was a knife, a whetstone and a ring-pin. Between these were three Arabic coins (Abbasidian and Samanidian), probably placed on the chest area, dated between 860-910. In the southern corner, in leg height were weapons.

Grave 738: was a SW-NE oriented coffin grave. On and by the chest area, most of the eight kinds of artefacts were found, all belonging to the apparel. To the left of the chest was a knife and by the feet were a clay pot and a band-shaped iron spur. Among the items on the chest were three Scandinavian coins (Carolus/Dorestad, Malmer CEIII/DIII (2ex); Malmer CE/D (1ex) (Malmer 1966, p. 279; Arwidsson 1989, p. 140)), all of them provided with silver eyelets (see *Fig 3*).

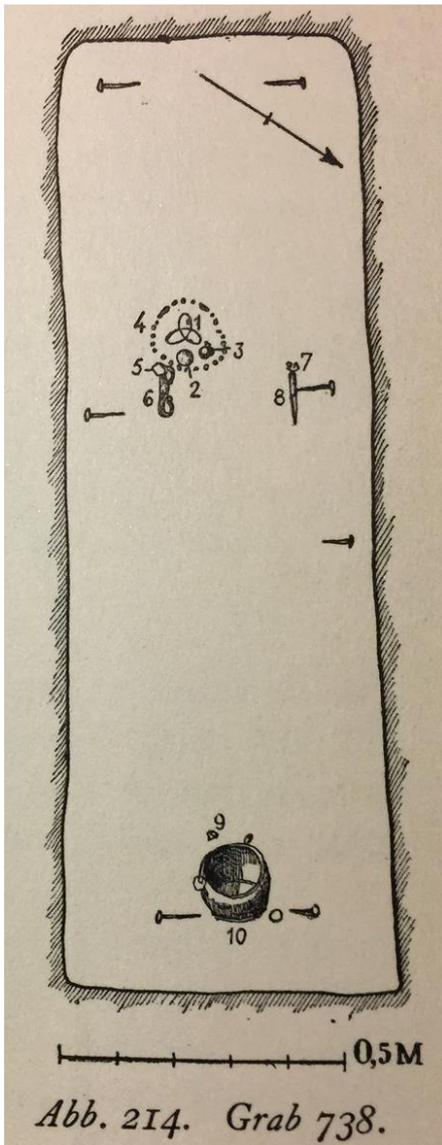


Fig 3: Blueprint of grave 738 (Arbman 1949a, p. 263).

Group (V)

This last group consists of eight chamber graves and one coffin grave, oriented $W\pm 35^\circ$ - $E\pm 35^\circ$, with coins on the chest.

Grave	Oval brooch	Clasp	Beads	Knife	Scissors	Key	Casket	Flint	Spur	Awl/tweezers/ ear-spoon/needle	Ring	Pendant	Bit	Vessel	Fittings	Whetstone	Ribbon	Weight	Nail	Comb	Arrows	Pouch	
557	x	x	x	x		x					x	x	x	x	x	x							
707		x	x	x	x							x					x	x				x	
847	x	x	x		x	x	x	x	x	x													
860B	x		x	x			x			x	x	x			x	x							
943	x	x	x	x	x				x	x	x	x		x	x	x	x	x					x
954	x	x	x	x		x		x		x	x	x			x	x		x	x				
963	x	x	x	x	x					x		x			x	x	x	x	x	x	x		
967	x	x	x	x	x					x		x		x	x		x	x					
1031		x	x	x					x					x	x								

Grave 557: in this WNW-ESE oriented chamber grave, the majority of the finds were placed in and by the chest area. These items either belonged to the apparel such as oval brooches or were part of a bead necklace with a pendant. By the right hip lay two keys and a ring, and in the southern corner, by the legs were fragments from a wooden bucket. Based on the AOT-method this grave contained 15 kinds of grave goods and the two coins found were among the items on the chest area. One of the coins was Francian, dated to 840-877 and the other a Byzantine coin dated to 842-856.

Grave 707: was a double chamber grave with a WSW-ENE orientation with an AOT of nine kinds. Most of the individuals have disintegrated but by the head of the southwestern body was a silver headband, two weights a silver ring-clasp and a 7-sided mirror. To the right of the body, next to the chest area was a silver pendant some beads and the three Arabic coins (Umajjad, Abbasid/Tahirid and Samanid) dated between 726-899. By the second body only an arrowhead was found, in the hip area.

Grave 847: in this WNW-ESE oriented coffin grave were (AOT) eight kinds of artefacts with most of the grave goods centred by the upper body. On the chest lay, several things, including two oval brooches, scissors, and beads alongside the two Scandinavian Hedeby half-bracteates (Carolus/Dorestad, Malmer CEII/DIII (Arwidsson 1989, p. 140)) with eyelets.

Further down, almost at knee level, were fragments from a case among other things (see Fig 4).

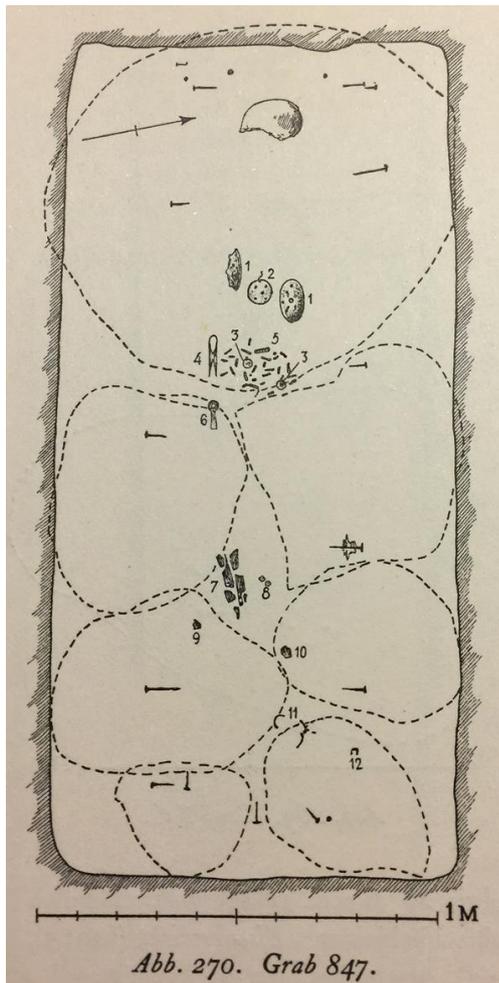


Fig 4: Blueprint of grave 847 (Arbman 1949a, p. 322).

Grave 860B: grave 860 is a double grave with, based on the presence of oval brooches, two women. Grave 860B, refers to the southern of the two individuals. The grave is of W-E orientation and (AOT) eleven types of grave goods found are associated with this individual. All of the finds were located on the chest and waist and consisted, mostly of items belonging to the apparel, such as the oval brooches, hygiene implements and jewellery (at least five pendants). Among these items were four coins, one Arabic and three Scandinavian (hjort/strålansikte, Malmer B1/A2, B/A1 (Malmer 1966, p. 279; Arwidsson 1989, p. 141)), all of them seem to be placed on the chest, dated between 749-833. To the right of the individual was also a large wooden box, apparently empty.

Grave 943: this W-E oriented chamber graves contained, based on the AOT-method, 17 different kinds of artefacts. Like in many other graves the artefacts were centred on and close

to the body. On the chest area were apparel related items such as oval brooches, jewellery such as beads and “a cluster of pendants” (including thorshammers). Among these pendants were 2 coins, one Hedeby half-bracteate and one Scandinavian coin (hjort/strålansikte, Malmer B1/A2; Carolus/Dorestad, Malmer CEII/DIII (Arwidsson 1989, p. 141)), both with eyelets. By the waist were fragments of a leather pouch with ¼ of an Arabic Samanid coin, among other things, dated to 908-912.

Grave 954: based on the AOT-method, this WSW-ENE oriented chamber grave containing 15 different types of artefacts. Also in this grave most of the grave goods were placed on the chest and by the waist. The artefacts by the chest consisted of clasps, oval brooches, jewellery and a knife, while the items by the waist were more diverse. Among other things, there were weights, an iron steel and an iron ring with a Thorshammer. On the chest were two Arabic coins with eyelets, dated between 771-911, and two Scandinavian coins (hjort/strålansikte B1/A2 (Arwidsson 1989, p. 141)) located.

Grave 963: this chamber grave was oriented WSW-ENE. Based on the AOT-method, this grave contained 16 different kinds of artefacts most of which were placed on the chest and beneath the feet. On the chest lay clothing artefacts such as oval brooches, personal items such as an ear spoon and jewellery, among other things two crosses. Among these pendants were also three coins with eyelets, one Franconian, one English, dated between 814-950, and one Scandinavian Hedeby coin (hjort/strålansikte, Malmer B1/A2 (Malmer 1966, p. 279; Arwidsson 1989, p. 141)). By the feet lay among other things, fragments from one or two cases and keys.

Grave 967: based on the AOT-method, this chamber grave contained 12 different kinds of grave goods. The individual in this WSW-ENE oriented grave, lay in what looked like a fetal position. For this reason, more or less all grave goods were placed on the chest area except for a small case placed by the feet. On the chest area were not only items belonging to the clothing such as oval brooches, but also jewellery such as a cross pendant and items such as weights, ribbons and a handle belonging to a bucket. The three coins had eyelets and were all placed among the jewellery on the chest area, one Arabic and two English, dated to between 742-950.

Grave 1031: not much can be said about this W-E oriented chamber grave. Only five different

kinds of artefacts were found in this grave were the skeletal seems to have disintegrated. For this reason, the placement of the two Arabic coins were based on the relation to the rest of the artefacts. The coins seem to be placed on what seems to be the chest and was dated to 769-810.

3.1.2.2.2 Summary

The result of the analysis of this category of “more than one coin” indicates that more than one coin in the same location occur in graves with a majority of high AOT-values compared to the category of “one coin or less”. Except that the majority placement of the coins was on the chest area, no other obvious pattern was discernible. It is possible that the high AOT-value indicates that the individuals in these graves, for one reason or another, had several coins available, potentially indicating assets.

Since the above studied category of coins occur in some graves alongside the category of “one coin or less” but as a separate manifestation, one can assume that these two categories had different meanings. For that reason, this category was henceforth studied as a separate potentially symbolic ritual.

3.1.2.3 One coin or less

More than double the number of graves contained one coin or less than graves with more than one coin. This category contained more of the grave-pit type and there are almost the same number of coffin graves as chamber graves (see table 8). This seems to indicate that there was no particular status pertaining to this coin category.

<i>Placement</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Total for Inhumations</i>
<i>Head</i>		<i>1</i>	<i>2</i>	<i>3</i>
<i>Chest</i>	<i>3</i>	<i>14</i>	<i>12</i>	<i>29</i>
<i>Waist</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>9</i>
<i>Feet</i>			<i>2</i>	<i>2</i>
<i>Other</i>	<i>1</i>	<i>3</i>	<i>1</i>	<i>5</i>
<i>Not Mentioned</i>	<i>2</i>			<i>2</i>
<i>Total</i>	<i>8</i>	<i>21</i>	<i>20</i>	<i>49</i>

Table 8: The distribution and placement of one coin or less not in pouches in the different types of graves based on Arbman (1943a). The placement of “other” encompasses placements such as: “to the left of the body”, “not near the body” and by the knee.

Table 8 above shows the division of graves with one coin or less and 59% of these coins were placed on the chest. Going forward only the coins placed on or close to the body will be further analysed since the other coins are more difficult to analyse as they may have been moved during bioturbation processes or simply positioned there by accident.

<i>Placement</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Total for Inhumations</i>
<i>Head</i>		1	2	3
<i>Chest</i>	2	14	12	28
<i>Waist</i>	1	2	4	7
<i>Feet</i>			2	2
<i>Total</i>	3	17	20	40

Table 9: The distribution and placement of one coin or less not in pouches, but close to the body in the different types of graves based on Arbman (1943a).

Of the remaining graves 70% of the coins were placed on the chest but no other pattern was discernible (see table 9), therefore the coins were divided into groups based on placement, grave orientation and grave type, to further the possibility to analyse.

Head:

The three graves in this Group were the only ones with a coin on or close to the head in the entire Birka material.

Grave	Spearhead	Shield	Knife	Whetstone	Sword	Weight	Arrow	Bit	Buckle	Stirrup	Vessel	Oval brooches	Clasp	Beads	Nails	Scissors	Embroidery	Pendant	Ring	Axe	Comb	
495	x	x	x	x											x		x		x	x	x	
496	x	x	x	x	x	x	x	x	x	x	x				x		x	x	x			x
550			x									x	x	x		x		x				

Grave 495: this weapons chamber grave's orientation has not been noted in the original notes.

Using the AOT-method, the grave contained ten different kinds of grave goods which were somewhat scattered. Above the head of the individual was a shield boss and a spearhead, on the head were ¼ of an Arabic coin, dated to 966, and a silver ribbon. Further down, on the chest was a horn comb and below the pelvis was a knife and a whetstone. To the side of the lower body of the individual was also a ring-clasp and the head of a battle-axe.

Grave 496: also this chamber grave, was a weapons grave and had an WNW-ESE orientation. This grave contained 17 different kinds of artefacts, based on the AOT-method. Above the individuals head lay a sword, a shield boss, a ring-clasp, silver-ribbon and a pendant. On the head was three weights and a silver ring, and immediately next to the head were a fragment of an Arabic coin dated to 907-908. In the chest area were among other things a knife and a comb, and by the feet was remnants of hors equipment and a crude clay pot.

Grave 550: was a coffin grave with WNW-ESE orientation. Not much was found in this grave, and based on the AOT-method, it contained only seven different kinds of grave goods, all belonging to the everyday apparel. These items were all centred around the chest area except for a fragment of an Arabic coin which seems to have been placed by the right chin and was dated between 697-718 (see Fig 5).

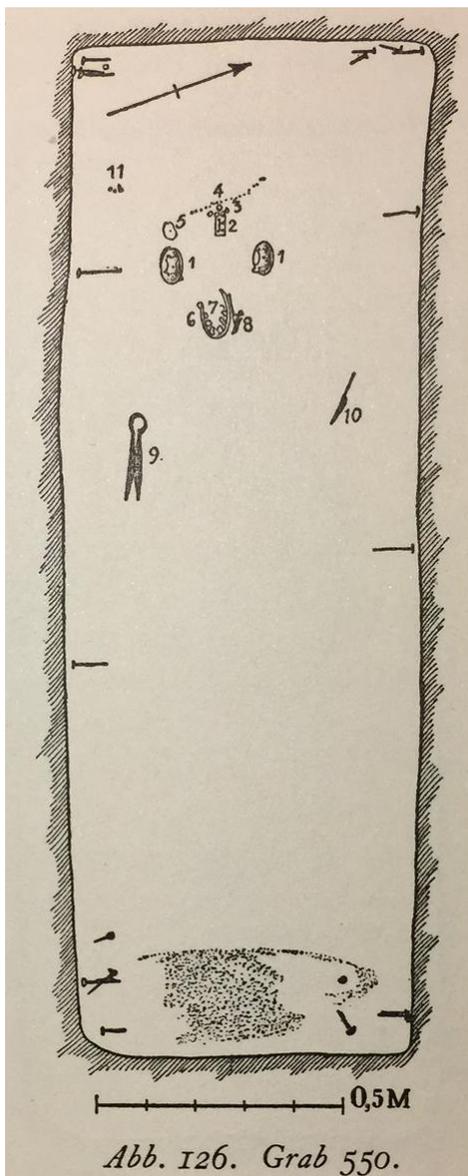


Fig 5: Blueprint of grave 550 (Arbman 1949a, p. 173).

Waist:

Group (I):

In this group are four chamber graves with a $W\pm 35^\circ$ - $E\pm 35^\circ$ orientation and coins placed on the waist.

Grave	Spearhead	Shield	Knife	Whetstone	Sword	Weight	Arrows	Bit	Buckle	Stirrup	Vessel	Oval brooches	Clasp	Beads	Nails	Scissors	Tweezers	Pendant	Box	Flint	Fittings	Spur	Fabric
510	x	x		x					x										x		x		x
639											x	x	x	x	x	x	x		x				
735	x	x	x	x	x	x			x	x		x	x	x	x	x	x		x	x	x	x	x
977		x	x		x		x	x			x		x		x							x	x

Grave 510: based on the AOT-method, this chamber grave oriented into the WNW-ESE direction, contained seven kinds of artefact of which most were weapons centred to the head- and feet area. In the waist area were also a ¼ of an Arabic coin dated between 880-920.

Grave 639: one Arabic coin, dated between 786-809, was placed in the waist area of this chamber grave. According to the AOT-method the grave contained eight different kind of artefacts, most of which belonged to the clothing, such as oval brooches and jewellery placed on the chest of the W-E oriented individual. In the southern corner of the grave was a large box and a small clay pot.

Grave 735: this rich chamber grave, contained 26 different kinds of artefacts, according to the AOT-method. According to Arbman (1943a) there were two individuals in the grave oriented in a W-E direction, though this is undiscernible in the drawing. The grave goods are divided between three locations, the chest and waist area, the upper southwestern corner and below the feet.

On the chest and waist area were weapons, items belonging to the clothing, such as clasps and oval brooches, hygiene items such as ear spoons, pieces of a mirror and jewellery. By the waist was one Scandinavian coin (Carolus/Dorestad, Malmer CEII/b- (Arwidsson 1989, p. 140)) with an eyelet.

In the upper corner was a glass beaker, clay pot and fragments from a box, while beneath the feet were the skeleton of a horse as well as equestrian equipment.

Grave 977: oriented in an WSW-ENE direction, this chamber grave contained eleven kinds of grave goods, both weapons and equestrian equipment. Above the head was a shield boss and a

bunch of arrowheads. On the chest and waist area were personal items such as a ring-clasp and a knife. Placed by the right hip was ¼ of an Arabic coin dated between 932-941.

To the left of the body was a sword and a wooden bucket, and beneath the feet were the skeleton of a horse along with 2 band-shaped iron spurs and a bit, among other things.

Group (II):

The following three graves were grouped together for their lack of common grave-type or orientation with coins placed by the waist.

Grave	Weight	Knife	Comb	Vessel	Ring pin
83A					
467A	x	x	x	x	
471	x	x			x

Grave 83A: was a grave-pit with a W-E orientation. No grave goods except a ¼ and a fragment of Arabic coins, dated between 590-800, which were placed on the pelvis.

Grave 467A: oriented in the NNW-SSE direction, this coffin grave contained only four kinds of artefacts, according to the AOT-method. These artefacts were scattered along the lower body, with a fragment of an Arabic coin, dated between 893-904, placed in the waist area together with a knife, and a clay pot towards the feet.

Grave 471: these two graves are very similar. Oriented in the NW-SE direction, also this coffin grave, contained just a few grave goods. Among these few items were a knife, an iron ring-pin and ½ of an Arabic coin, dated between 903-904, all placed in the waist area.

Feet:

The following two graves are the only graves in the material with coins placed by the feet outside a pouch.

Grave	Spearhead	Shield	Knife	Whetstone	Sword	Weight	Bit	Vessel	Pouch	Bridle	Nails	Game	Fire steel	Pendant	Ring	Flint	Fittings	Spur	Fabric
842	x	x	x	x	x		x	x		x	x				x		x		x
886	x		x		x	x		x	x			x	x		x	x	x	x	x

Grave 842: one Arabic coin was found by the feet along with a clay pot in this WSW-ENE oriented chamber grave. The other of the 12 kinds of grave goods, according to the AOT-method, were weapons and equestrian equipment. Above the head was a shield boss, a whetstone and a spearhead. On the chest was a silver ribbon, to the right of the body was a sword and below the feet was a horse skeleton and equestrian equipment.

Grave 886: this chamber grave with NNE-SSW orientation contained 15 different types of artefacts. These grave goods were widely scattered across the grave. Above the head was a shield boss and a knife, on the chest and waist area was a knife and weights. To the left of the body was the remnants of a game board and an Arabic coin in a small pouch, to the right was a sword, and beneath the feet were a ¼ of an Arabic coin and game pieces. The coins were dated between 812-900 AD.

This grave appears both in the “coins in pouches” category and the “one coin or less” category.

Chest:

The majority of the graves in this category has coins placed on the chest area. For this reason, these very varied graves have been divided into several groups.

Group (I):

The first group contain two grave-pits with approximately W-E orientation.

Grave	Pendant	Bracelet	Beads	Knife
843B	x	x	x	x
1112				

Grave 843B: this grave-pit was oriented in the WNW-ESE direction and had an Arabic coin with an eyelet, dated between 785-800, placed on the chest. Also the other five grave goods were placed on the chest and consisted of items belonging to the clothing and

jewellery.

Grave 1112: Not much can be said about this grave-pit, except the W-E orientation and a fragment of an English coin, placed on the chest, as the sole item in the grave.

Group (II):

The second group contain Coffin graves with a $W\pm 35^{\circ}$ - $E\pm 35^{\circ}$ grave orientation except for grave 991A which have a NNE-SSW orientation.

Grave	Oval brooches	Spearhead	Knife	Whetstone	Weights	Vessel	Clasp	Beads	Scissors	Pendant	Ring pin	Ring	Comb	Spur	Fabric	Flint	Needle case	Key	Fire steel	Pouch	Mirror	Button	Bracelet	Nail/Awl/ Tweezers/	
465	x		x				x		x				x		x									x	x
517	x		x				x	x	x	x							x								
712			x			x	x							x											
762			x				x	x		x											x				
777			x	x	x		x	x								x	x	x							
819			x			x					x									x			x		
839	x		x		x		x	x				x													
844	x		x	x		x	x	x		x					x										x
857	x		x			x	x	x	x					x	x										x
873			x	x			x						x												
978	x		x				x	x	x	x			x												x
991A		x	x		x		x							x	x	x			x						
1007			x				x																		

Grave 465: this WNW-ESE oriented coffin grave contained eight different kinds of grave goods. These grave goods all belonged to the clothing, such as oval brooches, scissors and a comb. All the items were placed in the chest area alongside a fragment of an Arabic coin dated to 805-815 AD.

Grave 517: this WNW-ESE oriented coffin grave contained nine kinds of grave goods, according to the AOT-method. Apart from a knife, all these grave goods were placed on the chest and belonged to the personal attire, such as oval brooches, clasps and a bronze needle case. Alongside these items were also a fragment of an Arabic coin, dated to 912< AD (see Fig 6).

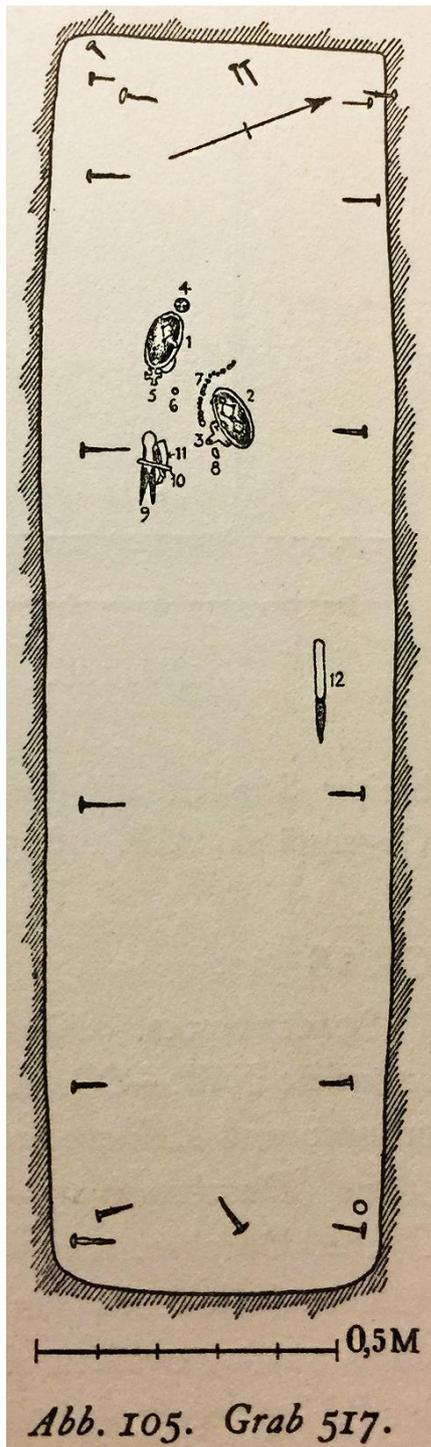


Fig 6: Blueprint of grave 517 (Arbman 1949a, p. 155)

Grave 712: this coffin grave had a WSW-ENE orientation and contained five different kinds of grave goods, based on the AOT-method. These few items were scattered across the grave, a fragment of an Arabic coin was placed on the chest area along with two ring-clasps and by the feet were a clay pot and four spurs (see Fig 7).

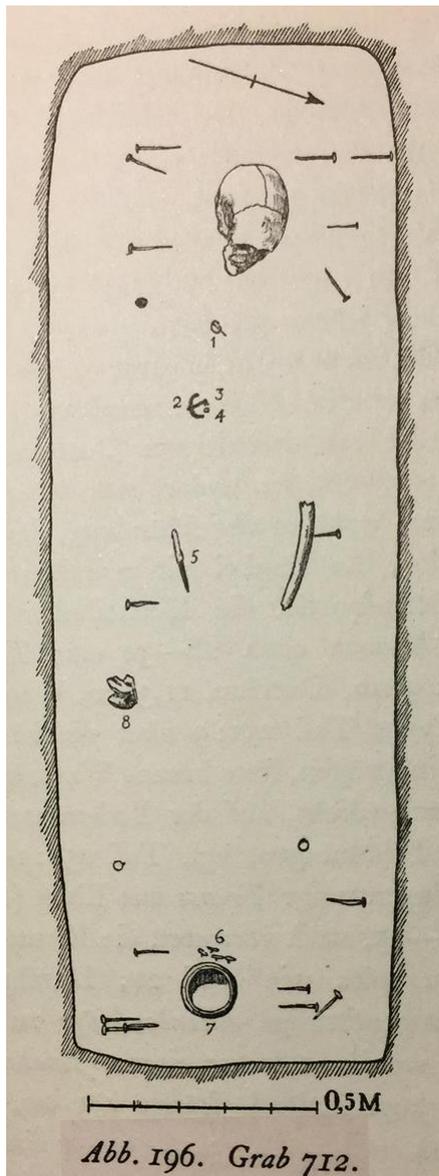


Fig 7: Blueprint of grave 712 (Arbman 1949a, p. 247).

Grave 762: this coffin grave with, based on the AOT-method, contain five different types of artefacts were oriented in a WNW-ESE direction. Apart from the remnants of a mirror, all items had been placed on the chest of the individual along with a fragment of an Arabic coin dated to the first half of the 10th century. The other artefacts consisted only of a clasp, a pendant and a knife.

Grave 777: this WSW-ENE oriented coffin grave contained eight kinds of grave goods. All these personal items seem to be placed on the chest area alongside a fragment of an Arabic coin dated between 951-954.

Grave 819: this coffin grave was oriented in a W-E direction and contained five types of grave goods scattered across the grave. Most of these items pertained to the everyday apparel apart from a clay pot and a fragment of an Arabic coin dated to 913-914, placed on the chest area.

Grave 839: according to the AOT-method, this W-E oriented coffin grave contained six types of grave goods. All the items belonged to the clothing, such as oval brooches, and were placed on the chest along with one non-determinable coin.

Grave 844: this coffin grave was oriented in a WNW-ESE direction. According to the AOT-method, the grave contained 13 types of grave goods, mostly placed on the chest. Among these items were four pendants, oval brooches and one gold-plated and one Arabic coin with an eyelet, dated between 812-815. By the feet were two handles from two buckets.

Grave 857: this WSW-ENE oriented coffin grave contained nine kinds of artefacts, based on the AOT-method. These grave goods were either placed on the chest area or beneath the feet. On the chest lay clothing related items such as oval brooches and clasps as well as $\frac{1}{4}$ of an Arabic coin dated to 833 < AD. Beneath the feet were instead items such as iron spurs and remnants of a wooden bucket.

Grave 873: According to the AOT-method, the grave contained four kinds of artefacts placed in the upper part of the grave. The items in this grave were everyday items such as a whetstone and a ring-clasp. On the chest of this WNW-ESE oriented individual lay a fragment of an Arabic coin dated to 908-932 AD.

Grave 978: according to the AOT-method, this W-E oriented coffin grave, contained nine types of artefacts, all pertaining to the apparel. The individual in this particular grave seems to be placed in a fetal-position with all the grave goods in the upper body region. Among other things, oval brooches and pendants were found in the vicinity of one Franconian coin with an eyelet, dated to 814-840 AD (see 8).

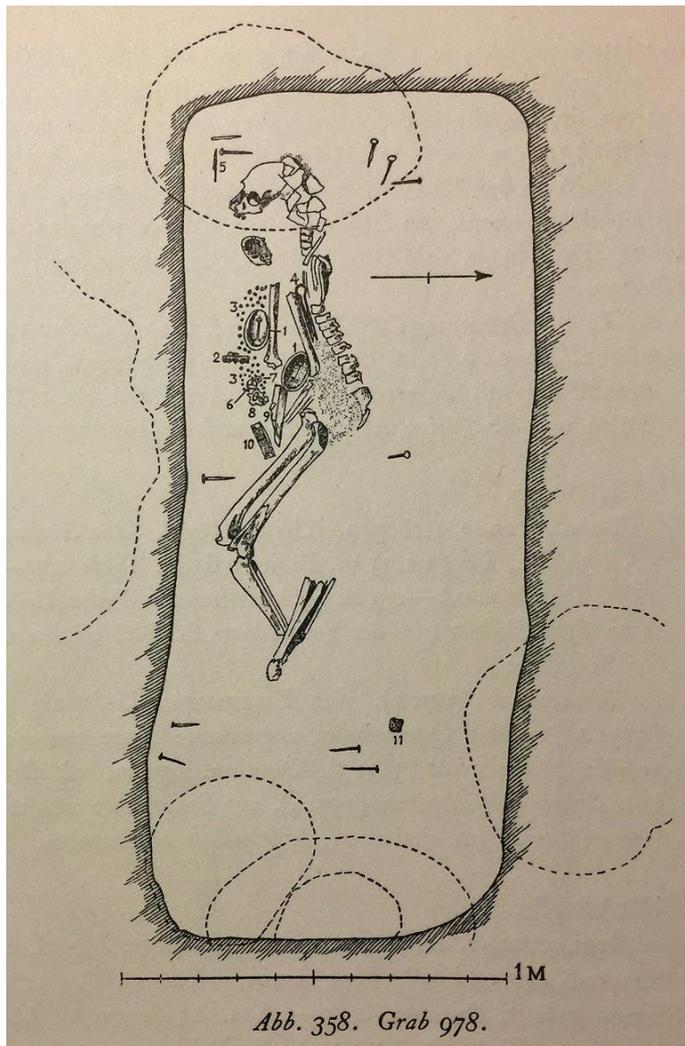


Fig 8: Blueprint of grave 978 (Arbman 1949a, p. 405).

Grave 991A: a fragment of an Arabic coin dated to 954-55 AD was found on the chest area in this NNE-SSW oriented coffin grave. Apart from the coin fragment, eleven additional types of grave goods were present, such as clasps, a spearhead fire steel and flint fragments among other things.

Grave 1007: ¼ of an Arabic coin dated to 776-784, and ¼ of a non-determinable coin were found on the chest. Apart from the coins this WNW-ESE oriented grave only contained items belonging to the apparel, placed on the chest.

Group (III)

The third group consist of nine chamber graves.

Grave	Spearhead	Shield	Knife	Whetstone	Sword	Weights	Arrow	Bit	Stirrup	Vessel	Oval brooches	Clasp	Beads	Scissors	Pendant	Ring	Axe	Comb	Spur	Fabric	Flint	Button	Game	Pouch	Bridle	Mirror	Ears spoon/ Needle/ tweezer/awl	
523										x	x	x	x		x	x				x				x	x			x
543			x			x	x			x	x	x	x	x	x			x										x
581	x	x	x	x	x		x	x	x	x					x	x	x	x					x					x
830	x	x	x			x	x	x	x			x				x		x	x									x
832	x	x	x		x		x			x			x			x					x				x			x
944	x	x	x	x	x	x	x	x				x	x			x		x		x	x	x						x
957	x	x	x	x	x	x				x		x								x								
964			x	x		x				x	x	x	x	x	x	x		x						x		x		
968			x			x					x	x	x	x	x	x				x					x			x

Grave 523: this chamber grave was oriented in a WSW-ENE direction. According to the AOT-method, the grave contained 13 different kinds of artefacts mostly centred on the chest and waist area, except for a finger ring, a silver ribbon and a padlock which were scattered across the grave, and several items placed in the mouth such as beads and pendants. On the chest and waist area were found items such as oval brooches, gaming pieces, jewellery and two gilded Gotland silver-bracteate 8th century alongside two fragments of an Arabic coin placed on the chest, dated 892<.

Grave 543: oriented in a WNW-ESE direction this chamber grave contained 16 types of grave goods placed on the chest and waist area. The grave goods consisted of an assortment of items such as oval brooches, clasps, soapstone, pendants and arrowheads among other things. Placed on the chest was also ½ of an Arabic coin found, dated between 749-874 AD.

Grave 581: this grave was a very rich weapons grave containing 20 different types of grave goods. The individual in this WSW-ENE oriented chamber grave was positioned in a fetal-position. Above the head were placed a bunch of arrowheads and a shield boss. On the chest area were 28 gaming pieces and a ¼ of an Arabic coin, dated between 920-921, placed. Around the body were placed weapons among other things and equestrian equipment alongside the skeleton of a horse beneath the feet (see *Fig 9*).



Fig 9: Hjalmar Stolpe (2007)
 Blueprint of grave 581 [Online
 Image]
 Identification number: 327041
 © ATA. Hjalmar Stolpe 2007-09-
 14
 Available from:
[http://mis.historiska.se/mis/sok/bil
 d.asp?uid=327041&page=2&in=1](http://mis.historiska.se/mis/sok/bild.asp?uid=327041&page=2&in=1)
 [Accessed 2018-05-10]

Grave 830: based on the AOT-method, this WSW-ENE oriented chamber grave, contained 18 kinds of artefacts scattered across the grave. In the southern corner lay a bunch of arrowheads and a spearhead, on the chest area were placed three fragments of an Arabic coin, dated between 907-913, and a weight. Further down were also found a knife and a horn comb, and beneath the feet were placed the skeletal of a horse alongside equestrian equipment.

Grave 832: this chamber grave with an WNW-ESE orientation. According to the AOT-method this grave contained 15 types of grave goods centred to the chest area and the area beneath the feet. On the chest area were found a sword, a knife and a ring-clasp alongside one Arabic coin dated to 907-913 AD. Beneath the feet were a shield boss and a clay pot, even further down were found the skeleton of a horse with equestrian equipment.

Grave 944: in a WSW-ENE oriented chamber grave, were found 21 different kinds of grave goods. Among these extremely scattered artefacts was one Arabic coin found placed on the chest area. Other grave goods in the vicinity were mostly weapons, and below the feet was a horse skeleton and equestrian equipment.

Grave 957: based on the AOT-method, this WSW-ENE oriented chamber grave contained nine types of artefacts placed along the body. A shield boss above the head, a silver braid possibly around the head, one Arabic coin dated to 904-905, placed on the chest and a sword by the legs, among other things.

Grave 964: this chamber grave had a WSW-ENE orientation. According to the AOT-method, the grave contained 14 different kinds of grave goods mostly concentrated to the chest and waist area except for a ring and a comb placed by the knee and a clay pot and a small leather pouch by the feet. The items placed on the chest and waist area pertained to the everyday apparel such as oval brooches and clasps alongside one Arabic coin, dated between 770-787, placed on the chest area.

Grave 968: placed in an WNW-ESE orientation, this chamber grave contained 15 kinds of artefacts, according to the AOT-method. The items in the grave were centred to the chest and neck area. Placed on the chest was one Arabic coin, dated to 860-861, with an eyelet. Other items in the grave were such as oval brooches, a bead necklace with a cross-pendant among other things.

Group (IV)

This group consist of two graves with an $E\pm 18-W\pm 18$ orientation.

Grave	Mirror	Pendant	Ring	Beads	Key	Vessel	Knife	Shield	Arrow	Clasp
758	x	x	x	x	x	x	x			
1053							x	x	x	x

Grave 758: this coffin grave was oriented in an E-W orientation contained eight different types of artefacts, based on the AOT-method. A glass mirror was found above the head of the individual and to the right of the head were a couple of keys. Around the neck was a bead necklace found close to a fragment of a silver coin, placed on the chest area. Further down by the feet were a clay pot placed, among other things.

Grave 1053: according to the AOT-method, this ESE-WNW oriented chamber grave, contained four kinds of grave goods. The artefacts in this grave were mostly concentrated to the upper half of the grave. Among other things a shield boss was placed at the head end of the grave, a bundle of arrowheads by the legs and ¼ of an Arabic coin dated between 750-757, placed on the chest.

Group (V)

The two graves in this group were oriented NW-SE and SW-NE.

Grave	Oval brooches	Pendant	Nail/Needle	Beads	Scissors	Vessel	Knife	Button	Clasp	Pouch	Weights
632	x	x	x	x	x	x	x	x			
966	x	x	x	x	x		x		x	x	x

Grave 632: this Chamber grave oriented in an NW-SE direction was connected with a second N-S oriented grave. According to the AOT-method the grave in question, contained 12 different types of artefacts concentrated to the chest area. These items consisted of grave goods pertaining to the clothing such as oval brooches. On the chest area were also placed jewellery, such as a bead necklace with at least six pendants of which one was a Byzantine coin, dated between 838-840, with an eyelet (see *Fig 10*).

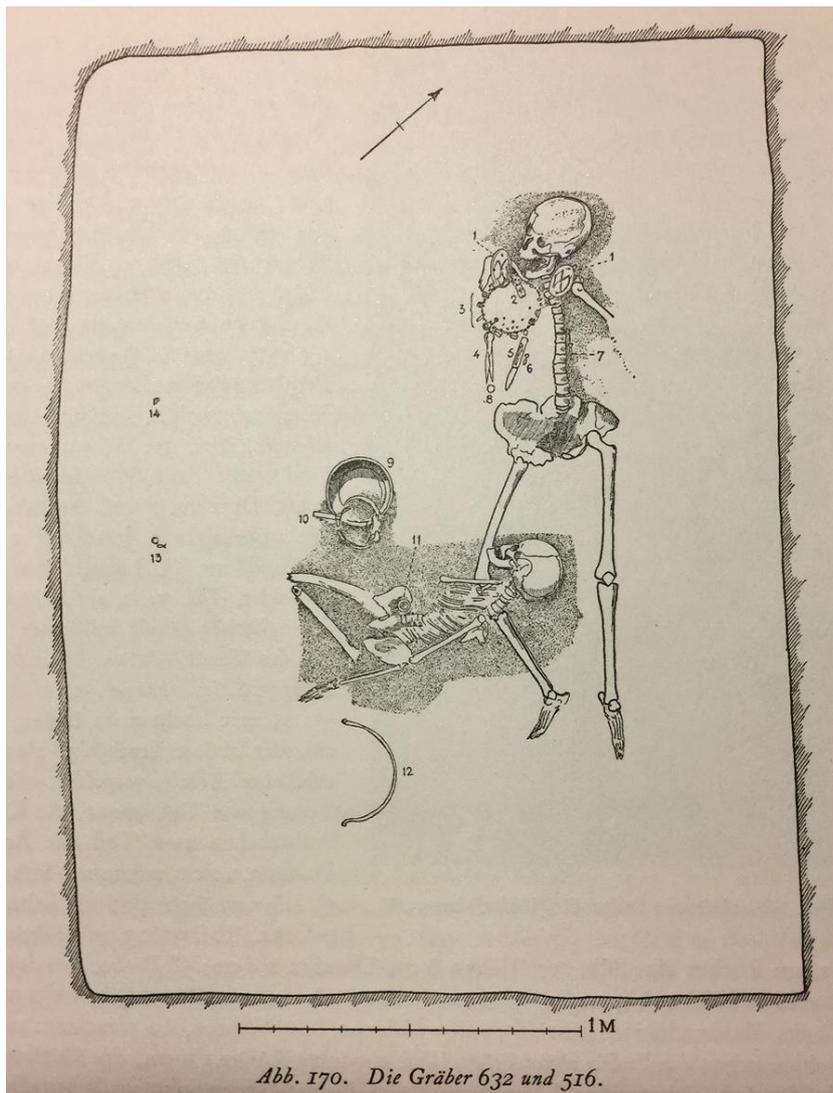


Fig 10: Blueprint of grave 632
(Arbman 1949a, p. 211).

Grave 966: based on the AOT-method, this SW-NE oriented chamber grave contained 11 kinds of grave goods. These artefacts were placed in the chest and waist area and consisted of apparel related items such as oval brooches, scissors and a small leather pouch alongside a $\frac{1}{4}$ of an Arabic coin, dated to 912-913 AD, placed on the chest.

3.1.2.3.2 Summary

The category of “one coin or less” in a location occur in graves with a widely varied AOT-number. The coffin graves and chamber graves were almost the same in number, in this category, though as a whole they differ in percentage. No other obvious pattern was discernible, neither when it comes to the placement of the coins nor the grave orientations.

3.1.3 Coins found in Birka

During the excavations in Birka and Björkö more than 1000 coins have been found (Gustin 2004a, p. 23). These consist mostly of silver coins from the Caliphate. However, both Hedeby coins, Byzantine coins, Roman coins, English originated coins and Carolingian coins have been found though the latter two have shown to be quite rare (Rispling 2004, p. 27; Price et al 2018, p. 21). During the excavation on the black earth 1990-1995, 107 coins were found out of which 90 were of Arabic origin (Rispling 2004, pp. 26). If this division of coins can be seen as representational, approximately 840 of the about 1000 coins from Birka would have been Arabic. In the 19th century Hjalmar Stolpe found about 30 Scandinavian coins, with the addition of the one coin found during the excavations between 1990-1995, the Scandinavian coins adds up to 31 in Birka (Gustin 2004a, pp. 13).

The origins of the coins in this particular study does little more than reflect the prevalent trading contacts in the area. The dominant coinage was of Arabic origin with the second largest group being Scandinavian Hedeby coins (see table 10). When comparing these two coin-categories approximately 11,5% of all Arabic coins and 48% of the Scandinavian coins were found in this grave material. However, the percentage presented here can be misleading since it is only based on partial information. Contrary to the Arabic coins which were found in graves with very varying AOT-values, the high percentage of Scandinavian coins found in the grave material combined with the fact that they commonly were found in graves with relatively high AOT-values indicates that some kind of ritual significance is possible or that Arabic coins were more commonly used in day to day activity.

	<i>Caliphate</i>	<i>Scandinavia</i>	<i>England</i>	<i>Franconia</i>	<i>Sassanidia</i>	<i>Byzantine</i>	<i>Rom</i>	<i>Not determinable</i>
<i>Number of Graves with Coins</i>	97	15	8	6	3	2	2	10

Table 10: The distribution of the different coins in the graves in Birka based on Arwidsson (1989) and Arbman (1943a).

	<i>Caliphate</i>		<i>Scandinavia</i>		<i>England</i>		<i>Franconia</i>		<i>Sassanidia</i>		<i>Byzantine</i>		<i>Rom</i>	<i>Not determinable</i>
<i>Head</i>	5													
<i>Chest</i>	39	4*	8	4*	3	2*	3	2*			2	1*		5
<i>Waist</i>	12		2		2				1					
<i>Feet</i>	6				1									
<i>Other</i>	13												2	2
<i>Not mentioned</i>	4		2						1					2

*Coins out of which was used as pendants.

Table 11: The distribution of the different coins and their placement and use in the graves based on Arbman (1943a). The placement “other” encompasses placements such as: to the left of the body, not near the body, between the legs, by the knee and in the fill.

The distribution of the different kinds of coins indicates no particular pattern nor specialised usages. All types of coins are found in several placements. However, the percentage of coins used as pendants are much greater regarding the Scandinavian, the English, the Franconian and the Byzantine coins, than the percentage of Arabic coins used as such. This further indicates the generic view of the Arabic coins and the possible importance of the other coins. The pendants were of different kinds of coins with different iconography (see table 11). However, no type of coin was solely used as pendants which indicates that they could have had different symbolic meanings (see table 11). When studying these coins, it has been interesting to take the iconography into consideration. Firstly, the coins from the Caliphate did not have any particular depictions but rather Arabic texts. The second largest group, Scandinavian coins, depicts boats/deer or boats/roosters and the like and the remaining groups, Byzantine, Franconian and English, all illustrate crosses (c.f. Arbman 1943b, pp. 137). One coin in particular is known for its Christian symbolism. The coin in question was of Louis the Pious (814-40), which on the reverse carried the words MVNVS DIVINVM, which means “divine gift” (Nasmith 2018, p. 154). This particular coin has been found in four cases in the Birka material: one in a chamber grave, one in a coffin grave (both used as pendants) and two in cremation graves. The notion that the coins iconography determined the ritual use of the coins in every case can hereby be discarded.

3.1.4 Summary

In this study, three categories of coins were found in the Birka material: (i) coins in pouches, (ii) more than one coin and (iii) one coin or less. Coins in pouches can be interpreted as personal items meant as payment in commerce and is probably not part of the Obolus tradition. Two of the focal points in the last two coin-categories were AOT and grave orientation in order to enable an analysis of possible religious affiliations.

The category of “more than one coin” in the same placement were further divided into five groups by the placement of the coins, the orientation of the graves and the grave type.

Group	Coin placement	Number of graves	Grave type	AOT-range	Grave orientation
i	Chest	2	Grave-pits	3-12	NW-SE/W-E
ii	Between bodies	2 (double)	Chamber graves	17-35	NW-SE
iii	Waist	2	Coffin graves	4-8	W-E/WNW-ESE
iv	Chest	3	Coffin/Chamber	8-12	SW-NE/NW-SE
v	Chest	9	Chamber graves	5-17	WNW-ESE/WSW-ESE

Table 12: The groups and their summarised content in the category of “more than one coin”.

The result of the analysis of this category indicates that the placement, more often, occurred on the chest in graves with relatively high AOT-values in chamber graves but no other discernible pattern was found. Meaning that the individuals in these graves for one reason or another had several coins available, potentially indicating capital. All this could indicate a different symbolic meaning than an Obolus tradition.

The category of “one coin or less” contained 40 graves and was thus divided into several groups.

Group	Coin placement	Number of graves	Grave type	AOT-range	Grave orientation
Head	Head	3	Coffin/Chamber	7-17	WNW-ESE
Waist (i)	Waist	4	Chamber Graves	7-26	WNW-ESE/WSW-ENE
Waist (ii)	Waist	3	Grave-pit/Coffin	1-4	W-E/NW-SE
Feet	Feet	2	Chamber Graves	12-15	WSW-ENE/NNE-SSW
Chest (i)	Chest	2	Grave-pits	1-5	W-E/WNW-ESE
Chest (ii)	Chest	13	Coffin Graves	3-13	WSW-ENE/WNW-ESE /NNE-SSW
Chest (iii)	Chest	9	Chamber Graves	9-21	WNW-ESE/WSW-ENE

Table 13: The groups and their summarised content in the category of “one coin or less”.

The graves in this category was mostly oriented in an approximately W-E orientation, however, no other pattern was discernible since the graves had a very varying AOT-value, coin placements (even though the majority was placed on the chest) or grave-type.

Even though the Birka material was thoroughly divided in order to create a possibility to analyse patterns, no such was found.

When studying the coins, it became apparent that the Scandinavian coins were used as pendants more often than Arabic coins though no type of coin was used in solely one specific way. It indicates that the iconography was not one of the main ways in which the coins in the graves were chosen.

3.2 Hedeby

The trade center of Hedeby was first mentioned in writing in 804 and due to its location on the Cimbric peninsula it became the Danish border town towards the south. Its eastern and western waterway access also made Hedeby a focal point between the North Sea and the Baltic Sea trade routes. Due to these circumstances, the proto-town soon became the richest in Denmark, until its destruction in 1066 (Hilberg 2008, p. 101).

The material utilised for this study was excavated between 1812 and 1970 in Hedeby (Arents and Eisenschmidt 2010b, p. 12). With a start in 2003, systematic metal detecting of the area has led to finds of coins of Scandinavian, Arabic, Anglo-Saxon and Continental origin

(Hilberg 2008, p. 103) but only 14 out of the 1355 excavated graves contained coins (Arents and Eisenschmidt 2010a, p. 175).

	<i>Graves in total</i>	<i>Inhumation</i>	<i>Cremation</i>	<i>Unknown</i>
<i>Coins</i>	<i>14</i>	<i>11</i>	-	<i>3</i>

Table 14: The distribution of coins in the different types of graves in Hedeby based on Arents and Eisenschmidt (2010a, 2010b).

Out of the 14 graves containing coins, 11 are confirmed inhumation graves while Arents and Eisenschmidt's (2010b) catalogue contain very sparse information regarding the remaining three graves (KI/12, H7/07 & KX/05) (see table 14) concerning the grave-types and other occurring grave goods.

The prospects of status in Hedeby was based on the grave-types themselves; Chamber graves, Coffin graves and Grave-pits. Chamber graves are generally perceived as higher status graves. However, these specific chamber graves do not appear to contain particularly many grave goods with AOT's ranging from 1-10. The corresponding graves in Birka contained on average more grave goods.

This indicates a fundamental difference of burial rituals in Birka and Hedeby. The presence of a vast amount of grave goods in Birka indicates their apparent significance in the grave ritual in Birka, which does not seem to be present in the rituals in Hedeby, at least according to the graves studied.

	<i>All Graves with Coins</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Confirmed Inhumation</i>
<i>Coins</i>	<i>14</i>	<i>1</i>	<i>6</i>	<i>4</i>	<i>11</i>

Table 15: The distribution of coins in the different types of graves in Hedeby, based on Arents and Eisenschmidt (2010a, 2010b).

<i>Placement</i>	<i>All Graves with Coins</i>	<i>Grave-pit</i>	<i>Coffin grave</i>	<i>Chamber grave</i>	<i>Inhumation</i>
<i>Head/Mouth</i>	3	1	2		3
<i>Chest</i>	3			2	2
<i>Waist</i>	2		2		2
<i>Thigh</i>	1		1		1
<i>Feet</i>					
<i>Fill</i>	1		1		1
<i>Not mentioned</i>	4			2	2

Table 16: The distribution and placement of coins in the different types of graves based on Arents and Eisenschmidt (2010a, 2010b).

Unlike the Birka material, very few finds of coins as grave goods have been made in the Hedeby material (see table 15).

There are, however, three confirmed findings of coins in the mouth of the deceased in Hedeby, a placement which is not apparent in the Birka material. The state of the coins varies moderately, based on the drawings and photographs of the grave goods the coins, even if fragmented seem to consist of no more than one coin per grave.

<i>Placement</i>	<i>Scandinavian</i>	<i>Caliphate</i>	<i>Franconian</i>	<i>Anglo-Saxon</i>	<i>Roman</i>	<i>Not determinable</i>
<i>Head/Mouth</i>	2	1				
<i>Chest</i>	1					1
<i>Waist</i>	1	1				
<i>Thigh</i>				1		
<i>Fill</i>		1				
<i>Not mentioned</i>	3		1	1*	1	
<i>Total</i>	7	3	1	1	1?	1

*Coins out of which was used as pendants.

Table 17: The distribution of the different coins and their placement and use in the graves based on Arents and Eisenschmidt (2010a, 2010b).

The coins found in the grave material consist of all the same variety of coins found throughout this proto-town, but no significant pattern can be discerned (see table 17). This seems to indicate that the coin in itself clearly was not important when considering their potential symbolic meaning.

On the other hand, there is a pattern regarding the placement. Three placements are clearly deliberate and need to be considered: the mouth, the chest and by the waist/pelvis (see table 16).

Mouth:

Grave 32: this 10th century coffin grave was oriented in a WSW-ENE direction (Arents and Eisenschmidt 2010a, p. 220). According to the AOT-method, the grave contained nine different kinds of grave goods concentrated to the upper half of the grave. Four long fittings were found one at each corner of the 2,1m x 0,9m coffin. 3/4^s of a Hedeby coin - a younger Carolingian type (so-called half bracteate), dated to ca 900-920 AD, was positioned in the mouth (Arents and Eisenschmidt 2010a, p. 177). However, no skeleton was evident on the drawing, the placement therefore seems uncertain but probably at least close to the head. The other items mostly pertained to the everyday apparel, such as oval brooches, a knife and a chain used as a belt.

Grave 32 was a rich grave which can be dated to the period before Hedeby became a bishopric but after the missionary work of Ansgar. However, one of the items originated from the Christian Carolingian empire.

Grave 167: this WSW-ENE oriented grave-pit was dated by Arents and Eisenschmidt to the 8th century and contained only one Arabic coin, an Abbasid dated to ca 759/760 AD. The coin was determined to have been positioned in the mouth area (Arents and Eisenschmidt 2010a, pp. 177, 220).

This grave is only separated from graves 166 and 168 by the depth in which they were found (Arents and Eisenschmidt 2010b, p. 63). This grave can be dated to the earliest of the Christianisation process, i.e. pre Ansgar, but after Bishop Willibrord's visit to Jutland.

Grave 849: in this grave, by Arets and Eisenschmidt dated to the 10th century, was found one Hedeby coin -younger Carolingian type (so-called half bracteate) dated to ca 950 AD placed in the mouth area (Arets and Eisenschmidt 2010a, pp. 177, 255). The coin was found between the teeth in this WSW-ENE oriented coffin grave and no other items was present.

The dating of the grave indicates that it was performed after Hedeby had become a bishopric and during the peak of the Christianisation process.

Chest:

Grave K X: this W-E oriented Chamber grave, only contained three fragments of a Hedeby coin - younger Carolingian type (so-called half bracteate) placed on the chest area dated to 900-920. From the drawing of the grave, no skeleton was visible. The placement determination made in the field therefore seems uncertain.

Grave K 2: based on the AOT-method, this WSW-ENE oriented 10th century chamber grave dated by Arets and Eisenschmidt, contained ten types of grave goods scattered throughout the grave. In the head/chest area were placed a fibula and some beads. The coin was only mentioned in the excavation report and is no longer detectable but was described as being placed in the chest area (Arets and Eisenschmidt 2010a, p. 177, 255). However, in the drawing of the grave, no skeleton was visible. It is therefore possible that the placement of the coin could be either chest or head. By the pelvis was a knife found and in the SW corner were a wooden bucket, a bronze bowl and a box placed.

The grave was dated to the Christianisation period, and though the orientation is proximally west-east, the subjective interpretation is that the grave probably was a relatively rich “pre-Christian” grave.

H7/07: this stray find provided no particular information apart from the finding of a Ludwig the Pious coin dated to ca 814-818 AD. The piece is gilded and pierced, thus it was probably worn as a pendant. This was the only pendant found in the Hedeby material.

Waist:

Grave 883: oriented in a W-E direction. This coffin grave was dated around the year 900 AD (Arents and Eisenschmidt 2010a, p. 255). The only artefact in the grave was an Arabic coin dated to 844-902/890-900 AD, placed in the pelvis area (Arents and Eisenschmidt 2010a, p. 177).

Grave 904: this 9th century coffin grave was oriented in a W-E direction (Arents and Eisenschmidt 2010a, p. 255). No other items than one Hedeby Older Carolingian coin (half bracteate) dated to 825 AD and placed in the pelvis area (Arents and Eisenschmidt 2010a, p. 177). It is a possibility that the coin could have been hand held.

This grave can be dated to after the second half of the 9th century, after Ansgar's missionary work in Hedeby but before Hedeby became a bishopric.

Thigh:

Grave 33: this WSW-ENE oriented coffin grave was dated by Arents and Eisenschmidt to around 1000 AD and contained one Otto-Adelheid coin of Lower Saxony dated to ca 990/995-1025/1030 AD. The coin was placed next to the left thigh (Arents and Eisenschmidt 2010a, pp. 177, 220).

Organic material have most likely decomposed but besides the nails and the coin no other traces of finds were discovered. The coin from Lower Saxony does depict a cross and could possibly have been hand held in the left hand and moved due to taphonomy or bioturbation. The dating of the grave indicates that the burial took place in a more or less Christian Denmark when Hedeby was a bishopric (Bartlett 1994).

3.2.2 Summary

Only a few graves containing coins were found in the Hedeby material, but a clear pattern was discernible, as can be seen in the table below (table 18).

Grave	Placement	Grave type	AOT-value	*TPQ	Grave orientation
32	Mouth	Coffin grave	9	10 th century	WSW-ENE
167	Mouth	Grave-pit	1	8 th century	WSW-ENE
849	Mouth	Coffin grave	1	10 th century	WSW-ENE
K X	Chest	Chamber grave	1		W-E
K2	Chest	Chamber grave	10	10 th century	WSW-ENE
H7/07	Chest	No info	No info	814-818 AD	No Info
883	Waist	Coffin grave	1	900 AD	W-E
904	Waist	Coffin grave	1	9 th century	W-E
33	Thigh	Coffin grave	1	1000 AD	WSW-ENE

Table 18: The groups and their summarised content in Hedeby. * TPQ: Terminus post quem, the earliest time the burial may have been performed.

Even though the coins were commonly placed in the mouth or the chest some variation existed together with a majority of low AOT-values and a grave orientation of an approximately W-E direction. This pattern, in addition to the dating, both based on Arents and Eisenschmidt (2010a) and the minting of the coins, indicates a possibility that the graves were early Christian graves.

The Birka material in comparison, to Hedeby, does not show such a homogenous pattern. Both the grave orientation, though mostly approximately W-E oriented, were still more diverse as well as the amount of grave goods found. Further the coins in the Birka material could be divided into three categories: (i) coins in pouches, (ii) more than one coin and (iii) one coin or less.

A short comparison between Hedeby and Birka would here be interesting. Firstly, the percentage of graves containing coins differ widely between Birka (10,5%) and Hedeby (1%). Even the number of placements differ somewhat since no coins were found in the mouth of the deceased in Birka contrary to Hedeby while no coins were found by the feet in Hedeby contrary to the Birka material. Furthermore, the AOT-range in Birka has a wide variety while the material in Hedeby were quite homogenous with few to non additional grave goods, with a few exceptions. Additionally, in the Birka material there existed three different coin categories which did not appear in the Hedeby material.

It is therefore apparent that these proto-towns were profoundly different in several ways one of which was the way coins was incorporated into the mortuary practices.

Coins seems thus have had different possible symbolic meanings not just pertaining to the Obolus tradition. However, throughout this study, the placement of coins on the chest area has shown to be the most common, possibly indicating the importance of this placement.

4. Discussion and Conclusion

The case studies of Birka and Hedeby show significant differences. In Hedeby there is a very limited occurrence of coins as grave goods, but the ones that do occur presents a relatively homogenous image with few other grave goods and a more or less W-E grave orientation, which is not seen in the Birka material. In Birka, the ritual has proven to be very varied. The variation can be seen in the different orientations of the graves, as well as the amount of other grave goods and the amount of coins in the burials. The coins in Birka were divided into three different coin categories in this study; (i) coins in pouches alongside other personal items, (ii) more than one coin in one placement and (iii) one coin or less in one placement, which will be discussed beneath.

There is also a pronounced difference between the use of coins in the grave material in western and eastern Scandinavia, which can be seen in Svanberg's (2003b) study of the grave rituals in southern Sweden (see appendix 1). Svanberg's study indicates that the significant differences between Birka and Hedeby were not locally occurring phenomena but seems in fact to have been a ritual difference throughout the whole of Scandinavia. This can be discerned from the occurrence of coins in the number of graves, in the western part of southern Sweden (Halland, Finnveden, Skåne and Bornholm) and in the eastern part of southern Sweden (Öland). In the entire western part, only thirteen cases of coins in graves were found, whilst on Öland, a total of twenty-two cases were discovered. However, in order to analyse this ritual difference, the initial theory discussion needs to be revisited.

Intersectionality as a network creating meaning was only partially possible to study, since only a few of all the aspects were possible to analyse. Within intersectionality, the other two initial theories, materiality and context, are partially included as part of the network of which this study consists. The aspects which were possible to study consist of materiality, context, grave types, grave orientation, AOT-values, iconography and ritual. From these aspects

different “social identities” can be observed. The grave types in this study can indicate status, social standing, position, economic standing or resources. The orientation of the grave can indicate possible Christian graves, since all Christian graves were oriented approximately west to east, however, not all west to east oriented graves were Christian. The AOT-method can indicate high status, however, within Christianity this method is unable to indicate low status since also the Christian graves usually contained few to non grave goods. The iconography on the coins can portray religious affiliations or depict power symbols. Materiality becomes pivotal within the intersectionality theory, in the act of identifying with objects and rituals, in this case, with coins as grave goods, in order to create culture and social differences. The same applies to contextuality which is the scene within which these aspects are placed and can be studied.

The grave rituals are and were always situational, strategic, surrounded by misconceptions and were influenced by agency’s motivational dynamics, which all affect and can be seen in the context. Simplified, the situational aspect lays in that every funeral was highly dependent on the period, place and people present at the time of its performance. Further, the placement of grave goods was always strategic, tactical and imbued with meaning for the people performing and participating in the rituals. However, all these rituals are surrounded by misconceptions – these exist in two levels, the first was created by the people participating in the ceremonies, who might have had their own reasons and thoughts regarding specific rituals which means that a ritual, though it was performed in the same way, could have had different meanings for the participants. The second level is formed by us as archaeologists, where arbitrary limits unconsciously are created through our limitations of perception and ability to truly understand the motivations of the historical populations. Furthermore, the rituals were influenced by the way in which the participants acted in practice and what motivated these actions. This could be one explanation to the different applied practices pertaining to the Obolus tradition. What this all boils down to is the importance of the context, which will be further discussed below.

When the coin’s amounts and placements in the graves are studied, the intentions and worldviews must be considered. Placements can in themselves have symbolic meaning: head, chest, waist and feet. The placement of coins by the head seems to only appear in the category of “one coin or less”, which therefore can be linked to the traditional implementation of the

Obolus tradition. However, the head placements constitute only three out of the 88 studied graves in Birka and three out of the 14 graves studied in Hedeby. They are therefore hardly the only ones with a symbolic meaning. What does then the other coins mean?

The placement on the chest may be linked to the ending of life and the last breath. Stevens (1991, p. 221) discusses the connection between the placement of the coin in the mouth and the symbolic meaning that the coin was intended for the soul. This connection was based on the notion that the soul left the body with the last breath. This possibly meant that the ceasing of breathing, which was a visible consequence of death, could be associated with the soul leaving the body. Whereas the placement by the waist, provided that no traces of a pouch was found, indicates the possibility that the coin(s) were handheld, possibly to pass the coin(s) on after death. The placement by the feet brings the thought to the reverence of the dead. To place gifts or offerings by someone's feet is a widespread sign of respect. This custom can for example be seen in the Bible verse 4:35 when the apostles represented God, as other worshipers placed offerings at their feet (Kittel, Friedrich & Bromiley 1985, p. 926), the act of Jesus washing the apostle's feet (Gould White 2014), the middle eastern tradition of washing the feet of ones' guests (Bruce-Mitford and Wilkinson 2008, p. 117), the Indian tradition of touching or kissing the feet of their elders (DeMello 2009, p. 169) and the incident when Rollo (Robert), the founder of Normandy, was asked to kiss the foot of the Franconian king Charles the simple, as a sign of submission and humility (durhamworldheritagesite.com). Hence the placement of coin(s) by the feet in the graves, possibly has more to do with the relationship between the dead and the funeral participants than anything else.

The representation of the ritual in the Birka material is further complicated by the necessity to divide the coins into three different coin categories as mentioned above. In several cases more than one of these categories can be seen in the same grave, e.g. in grave 731 in which three coins were found between the individuals in the double grave and three coins were found in a pouch by the feet of one of the individuals. The presence of more than one category of coins in the same grave, indicates that these categories had different symbolic meanings for the funeral participants.

The category of "one coin or less", can probably be derived from the traditional use of the Obolus coin based on the use of the Obolus both in the Greek contemporary literary sources and the traditional use of few coins. However, the coins in pouches may as previously mentioned, possibly be considered as practically usable objects that differ from the Obolus tradition. Multiple coins placed in the same location occurs in some graves in combination with a single fragmented coin in a different placement, this also indicates a difference in

possible symbolic meanings.

With the exception of two relatively rich chamber graves, the material studied in Hedeby is relatively homogenic. This homogeneity is seen in the presence of a single coin placed in a grave with an approximately west-east orientation and with few or no other grave goods. This grave-type is traditionally interpreted as belonging to early Christianity (Lund 2013, p. 46). This simplistic interpretation implies that graves with west-east orientation and without grave goods were early Christians while all graves with grave goods were pre-Christian. Julie Lund (2013) discusses in her article the complex and varied grave material visible in Scandinavia between 800-1100 AD. She means that the Christianisation process cannot be seen in the grave material as a linear development from the complex pre-Christian to the simplistic Christian (Lund 2013, p. 46). Furthermore, Lund means that the early Christian graves should in fact contain a number of items belonging to the clothing since the social order affected how the body was treated (Lund 2013, p. 48). During the Christianisation process social structures were changed, but some were also maintained or created. Which means that the practical change in the funeral rituals and the world perception, in the ninth to the eleventh century, was not a passive result of the Christianisation process but was an active part of said process (Lund 2013, pp. 48, 53). Evidence of these very varied funerary rituals can be seen in the studied material at Birka. Unlike Hedeby, where the majority of the studied graves indicates a Christian world view, the great number of cremation graves in Birka indicates a pre-Christian faith since one did not fragment the body within Christianity (Lund 2013, p. 56). There exists a possibility that 24 out of the 88 studied inhumation graves in Birka show signs which could be an indication of early Christianity based on the W-E orientation of these inhumation graves as well as the low amount of grave goods and their character and placement, i.e. if they belonged to the apparel or not. These graves, however, are evenly distributed between the three different categories of coins; (i) coins in pouches, (ii) more than one coin in a placement, and (iii) one coin or less in one placement. This indicates that the Obolus tradition as such was not Christian. Given the moment of reintroduction of the ritual and the places in which it was practiced, it is still likely that the ritual use of the coins was conveyed by Christians. However, the ritual seems to have been transformed to the point at which it lost its Christian religious meaning to obtain a purely symbolic and ritual meaning possible to use within several different religious contexts, based on the fact that the tradition seems to be present in both Christian and pre-Christian graves.

A possible reason for the great difference in the ritual use of coins in Hedeby and Birka may have to do with the proximity to the Christian areas. Hedeby was situated at the border to the Christian Carolingian empire and later the Franconian empire. Michael Odenweller (2015) writes about the use of Obolus-tradition during the early Christian period in today's Germany. For example, in the Franconian empire, coins have been found to have been used as jewellery (especially in necklaces) and as Obolus. Some of the studied coins iconography depicted crosses or Christograms (Odenweller 2015, pp. 125, 133). In today's southern Germany, gold and/or silver crosses thin as leaves, were found in the mouth of dead Christians around the 5th century (Odenweller 2015, p. 135). Hedeby's proximity to Germany can explain the undistorted ritual placing of coins in the mouth, a custom that seem to have been common in the Franconian area (Steuer 1970, p. 157). However, the iconography does not appear to be as important in Hedeby where only one Christian coin, Louis the Pious, appear. By comparison, the Byzantine and the Franconian empires were probably Birka's main Christian contacts (Ryman 2006, p. 8.) which allows for a greater potential corruption of the ritual, as discussed with the misconceptions surrounding the rituals above.

However, the question still remains, why are coins used in graves in Birka where no local coinage yet exists (Edvinsson and Franzén 2015, p. 381)? Or, for that matter, how is it that there are so few coins in the grave material in Hedeby where coining has existed since the 800's (Edvinsson and Franzén 2015, p. 381)? What does a coin mean in a silver economy where the means of payment could be made with metal as well as with jewellery or livestock (Edvinsson and Franzén 2015, p. 382)? The coin in this economy context is therefore not the sole monetary entity. The materiality of coins is very complex. Through materiality, the coins relations, iconography, material, processes, nationality, dating, symbolic, religious and ritual potential, meaning and use could be analysed. Firstly, the materials and the production choice could have affected the individual and the society. However, since the minting of coins were not performed in one of the studied areas, the production aspect will not be further discussed here. Instead focus must be placed on the materials durability, specific properties regarding form, colour and texture. However, it is important to remember that the society to which the object is connected also creates and reflects the society itself. The material, in the grave context, may have been chosen for its durability and could possibly symbolise the wholeness and sustainability of the body, however, any object of the same material should be able to symbolise the same thing. Secondly, the variation of the coins in both Hedeby and Birka indicates that the iconography was not of importance for the symbolic meaning. This

interpretation is strengthened by the Christian's willingness to depict Arabic coins in one of the most sacral donations in Christian history, the donation of gold to the Christ-child. Which can be seen on the stained windows of the Chartres cathedral (Nasmith 2018, pp. 142, 153).

The significant variation of the ritual use of coins in the studied grave material, indicates several different symbolic meanings, which can be recognised in the Roman empire, where coins were used in several different ways. Such as pendants, placed in burials and placed in holy water (Perassi 2018, p. 49). This reinforces Steven's (1991) idea that the coin itself has a symbolic meaning separate from the symbolic meaning of the Obolus.

From both ancient Greece and the Roman empire as well as the Celtic area, coins can be related to a chthonic connection through the opening of the grave, a connection which can be seen in the early Christian grave rituals in the form of alms (Stevens 1991, pp. 227). In the Christian graves the coins served as a way of a symbolic shift of power from the living to the dead, this world to the next (Stevens 1991, p. 229). Another source of the non-monetary power of the coins lies in the tendency of replacing the message with its medium, which allowed the coin to give the owner protection through supernatural means (Maguire 2007, pp. 1040, 1053), since coins by means of iconography could convey power. The coins themselves came to communicate power independently of the iconography, these coins went from worldly commerce, to instead encompass trade with the invisible world, with saints and demons, and the dead (Maguire 2007, p. 1040). It is therefore even possible that coins were seen as having an inherent ability to communicate. In this case the communication most likely was directed towards the deceased or to the after world.

In the varied occurrence of coins in the funeral ritual the category of "one coin or less" seems to correlate to the traditional Obolus coin. It is possible that Christianity can have been an influence, due to the timing of the reintroduction of the ritual and the places in which they are performed. However, despite the probable correlation between the ritual use of coins in the grave material and Christianity, the tradition in itself is not likely to have been Christian, but rather ritual in use. From this study it is apparent that Gräslund's (1967) conclusion that eastern and western Scandinavia differs greatly from each other was correct, it is also apparent that it probably is due to completely different grave rituals in these areas as well as varying proximity to the Christian regions.

The great variety and different ritual uses of coins in this material strongly suggests that the presence of coins in grave material should not necessarily be interpreted as an Obolus coin, since they probably have a broader and more complex symbolic meaning.

Summary

The Obolus tradition originates in the myth of Charon and was a means of payment by which the dead would be conveyed to the afterlife. The tradition spread to Scandinavia from the Greco-Roman area during the Early Roman Iron Age. According to Gräslund (1967), the Obolus tradition in Scandinavia disappeared during the fifth and eighth centuries and was reintroduced again during the Viking Age. This reintroduction took different shapes in western contra eastern Scandinavia and according to Gräslund (1967), these differences was linked to trading contacts with the Byzantine empire.

The aim of this dissertation was to investigate Gräslund's statements about the return of the Obolus tradition and its different usages in western and eastern Scandinavia. The following questions were also investigated in this study: How is the Obolus tradition expressed in Scandinavia during the Viking Age and is there a connection between the re-introduced Obolus tradition and Christianity? What can such correlation or lack of it say about Obolus traditions religious symbolism during the second wave?

In order to answer the above-mentioned questions, a qualitative case study was carried out, encompassing the distribution of coins in Viking Age graves in the trading centers Hedeby on the border between Denmark and Germany, and Birka situated 30km from Stockholm on Björkö. To carry out this project, Gräslund's article "Charons mynt i vikingatida gravar" (1967) was used as an antecedent in addition to Arbman's (1943a) grave index of Birka: *Birka I. Die Gräber. Text*, and Arents and Eisenschmidts (2010) Index of Hedeby: *Die Gräber von Haithabu. Band 1: Text, Literature*, and Svanbergs (2003) Index of Southern Sweden: *Decolonizing the Viking Age 2*.

Theoretical concepts were taken into account in this study in order to understand the complexity of the context, in addition to the impact the coins could have had on the individual and the historical society at large. These theoretical concepts included *Materiality*, *Context* and *Intersectionality*, as well as a brief history of Scandinavia's Christianisation process and a theoretical study of rituals, in order to understand the holistic image of the grave goods and the people involved.

The material in Birka proved to be overwhelmingly varied in terms of grave orientation, the placement and number of coins in the graves and the extent of other grave gifts, while the Hedeby material was very homogeneous with a W-E orientation and very few grave goods.

The conclusion was drawn that the use of coins as grave goods differed widely between the western and eastern parts of Scandinavia, possibly due to their different proximity to the Christian regions. It is likely that the reintroduction of the ritual was brought by Christians, but it is unlikely that the ritual has a religious Christian meaning, rather than purely ritualistic and symbolic, due to the wide variety of expression and use in several different constellations of rituals and world views.

Bibliography

- Arbman, H. (1943a) *Birka I. Die Gräber: Text*. Stockholm: K. Vitterhets Historie och Antikvitets Akademin.
- Arbman, H. (1943b) *Birka I. Die Gräber: Tafeln*. Stockholm: K. Vitterhets Historie och Antikvitets Akademin.
- Arents, U. and Eisenschmidt, S. (2010a) *Die Gräber von Haithabu. Band 1: Text, Literatur*. Neumünster: Wachholtz Verlag.
- Arents, U. and Eisenschmidt, S. (2010b) *Die Gräber von Haithabu. Band 2: Katalog, Listen, Beilagen*. Neumünster: Wachholtz Verlag.
- Arwidsson, G. (1989) Die Münzen der Gräber von Birka. In: Arwidsson, G., (ed.) *Birka II:3. Systematische Analysen der Gräberfunde*. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, pp. 137-142.
- Bartlett, R. (1994) *The Making of Europe: Conquest, Colonization and Cultural Change 950–1350*. London: Penguin books.
- <https://books.google.se/books/content?id=9R0fmcWVJAgC&hl=sv&pg=PT26&img=1&pgis=1&dq=hedeby&sig=ACfU3U0IhXFgOGnkqTjGK1zk9fnkjMsSw&edge=0> [2018-05-07]
- Bell, C. (1992) *Ritual Theory. Ritual Practice*. New York: Oxford University Press.
- Bemmann, J. (2005) Zur Münz- und Münzersatzbeigabe in Gräbern der Römischen Kaiserzeit und Völkerwanderungszeit des mittel- und nordeuropäischen Barbaricum. In: Häßler, H-J., (ed.) *Studien zur Sachsenforschung 15, 2005 (Neue Forschungsergebnisse zur nordwesteuropäischen Frühgeschichte unter besonderer Berücksichtigung der altsächsischen Kultur im heutigen Niedersachsen)*. Oldenburg: Isensee, pp. 1-62.
- Bruce-Mitford, M. and Wilkinson, P. (eds.) (2008) *Signs & Symbols*. London: Dorling Kindersley.
- Bæksted, A. (1986) *Nordiska gudar och hjältar*. Stockholm: Forum.
- Chenoweth, J. M. (2009) Social identity, material culture, and the archaeology of religion. *Journal of Social Archaeology*, vol 9(3). pp. 319-340.

- Collins, P H. and Bilge, S. (2016) *Intersectionality*. Cambridge: Polity.
<https://ebookcentral.proquest.com/lib/lund/reader.action?docID=4698012&query=> [2018-03-19]
- DeMello, M. (2009) *Feet and footwear: A Cultural Encyclopaedia*. Santa Barbara: ABC-CLIO.
- Díaz-Andreu, M. and Lucy, S. (2005) Introduction. In: Díaz-Andreu, M. et al, (eds.) *Archaeology of Identity: approaches to gender, age, status, ethnicity and religion*. London: Routledge, pp. 1-12.
- Edvinsson, R. and Franzén, B. (2015) Sveriges tidiga formella penningväsende. *Historisk Tidskrift* 135:3, pp. 377-400.
- Edwards, D. N. (2005) The Archaeology of Religion. In: Díaz-Andreu, M. et al, (eds.) *Archaeology of Identity: approaches to gender, age, status, ethnicity and religion*. London: Routledge, pp.110-128.
- Ekengren, F. (2009) *Ritualization – Hybridization – Fragmentation. The Mutability of Roman Vessels in Germania Magna AD 1-400*. Lund: Lund University.
- Flyvbjerg, B. (2003) Fem missförstånd om fallstudieforskning. *Statsvetenskaplig Tidskrift* 2003/04, årg 106 nr 3, pp. 185–206.
- Gorecki, J. (1976) Studien zur Sitte Münzbeigabe in römerzeitlichen Körpergräbern zwischen Rhein, Mosel und Somme. *Bericht der Römisch-Germanischen Kommission* 56, 1976. Mainz am Rhein: Zabern, pp. 179-467.
- Gould White, E. (2014) *Spiritual Gifts*. Loschberg: Jazzybee Verlag.
<https://books.google.se/books/content?id=ssQkBQAAQBAJ&pg=PT437&img=1&pgis=1&dq=washing&sig=ACfU3U2I7Iy2uwDw4f005ZzV5oevS8WAOA&edge=0> [2018-05-07]
- Grinder-Hansen, K. (1991) Charon's Fee in Ancient Greece? *Danish Studies in Classical Archaeology*. Acta Hyperborea 3 (1991). Copenhagen: Tusculanum Press, pp. 207–218.
- Gräslund, A-S. (1967) Charons mynt i vikingatida gravar. *Tor* nr 11, 1965/66, pp. 168–197.
- Gräslund, A-S. (1980) *Birka IV. The Burial Customs. A Study of the Graves on Björkö*. Stockholm: K. Vittenhets Historie och Antikvitets Akademien.

- Gustin, I. (2004a) Coins and Weights from the Excavations 1990-1995. An Introduction and Presentation of the Material. In: Ambrosiani, B. (ed.) *Eastern Connections. Excavations in the Black Earth 1990-1995. P. 2, Numismatics and Metrology*. Stockholm: Birka Studies, Riksantikvarieämbetet, pp. 11-25.
- Gustin, I. (2004b) Islamic Coins and Eastern Contacts. In: Ambrosiani, B. (ed.) *Eastern Connections. Excavations in the Black Earth 1990-1995. P. 2, Numismatics and Metrology*. Stockholm: Birka Studies, Riksantikvarieämbetet, pp. 96-120.
- Hedeager, L. (1990) *Danmarks Jernalder. Mellem stamme og stat*. Aarhus: Univ.
- Hedenstierna-Jonson, C. et al, (2017) A female Viking warrior confirmed by genomics. *American Journal of Physical Anthropology*. 2017; pp. 1-8.
- Hilberg, V. (2008) Hedeby: An Outline of its Research History. In: Brink, S. and Price, N. (eds.) *The Viking World*. 2008. London: Routledge, pp. 101-111.
- Hodder, I. (2012) *Entangled: An Archaeology of the Relationships Between Humans and Things*. Malden, MA: Blackwell Publishing Ltd.
- Hurcombe, L. (2007) *Archaeological Artefacts as Material Culture*. London: Routledge.
- Ingold, T. (2000) *The perception of the environment: essays on livelihood, dwelling and skill*. London: Routledge.
- Jibbefors, T. (2015) *Vapengravar och krigaridentitet*. Archaeology and Ancient History: Master's Thesis – Archaeology ARKM21. Lund.
- Kittel, G., Friedrich, G. and Bromiley, G.W. (eds.) (1985) *Theological Dictionary of the New Testament: Abridged in One Volume*. Grand Rapids, Mich.: Eerdmann.
- Lund, J. (2013) Fragments of a conversation: handling bodies and objects in pagan and Christian Scandinavia AD 800-1100. *World Archaeology*, vol 45, 2013 – issue 1: *Archaeology of Religious Chang*, pp. 46-63.
- Lund Hansen, U. and Rindel, P. O. (2008) Charons-Objekter: kosmologi og kulturlandskab i Øresundsregionen i yngre romersk jernalder. In: Carlie, A. (ed.) *Öresund – barriär eller bro? Kulturella kontakter och samhällsutveckling i Skåne och på Själland under järnåldern*. Lund, pp. 111–145.
- Maguire, H. (2007) Magic and Money in the Early Middle Ages. *Speculum*, Vol. 72, No. 4. (Oct., 1997), pp. 1037-1054.

- Malmer, B. (1966) *Nordiska mynt före år 1000*. Lund: Univ.
- Merriam, S. B. (1994) *Fallstudien som forskningsmetod*. Lund: Studentlitteratur.
- Morales, H. (2011) Grekland. In: Cotterell, A. (ed.) *Mytologi. Gudar, Hjältar och Myter*. Bath: Perragon books Ltd, pp. 54–67.
- Nasmith, R. (2018) Pecuniary Profanities? Money, Christianity and Demonstrative Giving in the Early Middle Ages. In: Burström, N. and Ingvardson, G. (eds.) *Divina Moneta. Coins in Religion and Ritual*. Religion and Money in the Middle Ages; 2. London: Routledge, pp. 142-159.
- Nordeide, S. W. (2011) *The Viking Age as a Period of Religious Transformation. The Christianization of Norway from AD 560-1150/1200*. Turnhout: Brepols.
- Odenweller, M. (2015) Goldmünze und Goldblattkreuz. Die Obolus-Beigabe in frühmittelalterlichen Bestattungen als Zeugnis der Christianisierung. *Frühmittelalterliche Studien* 48 (1) (2015), pp. 121-156.
- Perassi, C. (2018) Coins and Baptism in Late Antiquity: Written Sources and Numismatic Evidence Reconsidered. In: Burström, N. and Ingvardson, G. (eds.) *Divina Moneta. Coins in Religion and Ritual*. Religion and Money in the Middle Ages; 2. London: Routledge, pp. 49-67.
- Price, T. D. et al. (2018) Isotopes and Human Burials at Viking Age Birka and the Mälaren Region, East Central Sweden. *Journal of Anthropological Archaeology* 49 (2018), pp. 19–38.
- Ringstedt, N. (1998) Hushållsekonomisk arkeologi – några metoder och tillämpningar. *Fornvännen* 1998(93), pp. 167–179
- Rispling, G. (2004) Catalogue and Comments on the Islamic Coins from the Excavations 1990-1995. In: Ambrosiani, B. (ed.) *Eastern Connections. Excavations in the Black Earth 1990-1995. P. 2, Numismatics and Metrology*. Stockholm: Birka Studies, Riksantikvarieämbetet, pp. 26-60.
- Roesdahl, E. (1998) *The Vikings*. London: Penguin.
- Ryman, B. (2006) *Från söder till norr. Tyskt och svenskt i kyrkan 829–2000*. Utgiven av svenska kyrkans enhet för forskning och kultur. Upsala: Svenska kyrkan.
- Staecker, J. (1999) Thor's hammer – symbol of Christianization and political delusion. *Lund Archaeological Review*: 5, pp. 89–104.

- Steuer, H. (1970) Zur Gliederung frühgeschichtlicher Gräberfelder am Beispiel der Münzbeigabe. *Neue Ausgrabungen und Forschungen in Niedersachsen* 6, 1970, pp. 146-190.
- Stevens, S. T. (1991) Charon's Obol and Other Coins in Ancient Funerary Practice. *Phoenix*, Vol. 45, No. 3 (Autumn, 1991). Classical Association of Canada, pp. 215-229
- Svanberg, F. (2003a) *Decolonizing the Viking Age 1*. Lund: Univ.
- Svanberg, F. (2003b) *Death Rituals in South-East Scandinavia AD 800-1000. Decolonizing the Viking Age 2*. Lund: Univ.
- Thüry, G. E. (1999) Charon und die Funktionen der Münzen in römischen Gräbern der Kaiserzeit. In: Dubuis, O.F. et al, (eds.) *Trouvailles monétaires de tombes: Actes du deuxième colloque international du Groupe suisse pour l'étude des trouvailles monétaires (Neuchâtel, 3-4 mars 1995)* (Études de numismatique et d'histoire monétaire, 2), Lausanne: Éditions du Zèbre, pp. 17-30.
- Vandkilde, H. (2000) Material Culture and Scandinavian Archaeology: A Review of the Concepts of Form, Function, and Context. In: Olausson, D. and Vandkilde, H. (eds.) *Form, Function & Context*. Stockholm: Almqvist & Wiksell International, pp. 3-49.

Internet Sources:

Arkeologi (n.d.) *Intersectionality* [WWW]

Available from: <http://www.arkeologi.uu.se/Forskning/Projektarkiv/Intersectionality/>

[Accessed 2018-03-13]

Durhamworldheritagesite (n.d.) *Rollo the Viking* [WWW]

Available from: <https://www.durhamworldheritagesite.com/history/normans/founding-normandy> [Accessed 2018-05-02]

Historiskamuseet (n.d.) *Birka Portalen* [WWW]

Available from:

<http://mis.historiska.se/mis/sok/birka.asp?page=2&mode=1&filter=&zone=&catid=>

[Accessed 2018-03-13]

Online Images:

Fig 1: Photographer: Falconaumanni (2013) *Roman skull with an obol (an Antoninus Pius dupondius) in the mouth* [Online Image] This file is licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license.

Available from:

https://commons.wikimedia.org/wiki/File:Cr%C3%A1neo_con_dupondio.JPG

[Accessed 2018-05-10]

Fig 9: Hjalmar Stolpe (2007) *Blueprint of grave 581* [Online Image]

Identification number: 327041

© ATA. Hjalmar Stolpe 2007-09-14

Available from: <http://mis.historiska.se/mis/sok/bild.asp?uid=327041&page=2&in=1>

[Accessed 2018-05-10]

Appendix

Appendix 1: Coins in Graves in Southern Sweden

This is a brief chapter created in order to analyse the risk that the difference apparent in the monetary grave rituals between Hedeby and Birka was a localised occurrence which did not apply throughout eastern and western Scandinavia.

Fredrik Svanberg (2003b) performed a study of the grave rituals in southern Sweden, focusing on Halland, Finnveden, Skåne, Bornholm and Öland. In the study the only area located in the eastern Scandinavia is Öland.

	West				East
	<i>Halland</i>	<i>Finnveden</i>	<i>Skåne</i>	<i>Bornholm</i>	<i>Öland</i>
<i>Number of Graves</i>	1	6	2	4	22

According to Svanberg's research there is a significant difference between the eastern and western parts of southern Sweden. Almost the double amount of coins as grave goods were found on Öland than all the other studied areas combined.

He further argues that different grave rituals were performed in these areas (Svanberg 2003a). The grave rituals in Skåne mirror the ones in Denmark and the rituals in Öland mirror the ones in Birka (Svanberg 2003a).

The conclusion is therefore that the difference which is apparent in the case studies of Hedeby and Birka applies for the entire eastern and western parts of Scandinavia.

County	Grave Dating	Site	No	Object	Position?	Date of Coinage	References
Halland	9th century	Sannagård. Faurås hundred, Vinberg parish RAÄ 30.	195A	3 coins + 2 "Hedeny coins"		749-815 c. 825	Svanberg 2003b, p. 179
Finnveden	1000-1100	"Kånna högår". Sunnebo hundred, Kånna parish RAÄ 24.	279	Coin	In the mouth		Svanberg 2003b, p. 191
Finnveden		Prästgården. Sunnerbo hundred, Vittaryd parish	4	Coin			Svanberg 2003b, p. 193
Finnveden	900-1000	Torskinge. Västbo hundred, Torskinge parish RAÄ 20.	26	Part of Islamic coin			Svanberg 2003b, p. 202
Finnveden	After 950	Nästa. Östbo hundred, Kärda parish RAÄ 42.	19	Gold-foil bead	Prbably in the mouth		Svanberg 2003b, p. 207
Finnveden	900-1000	Värnamo. Östbo hundred, Värnamo parish RAÄ 2.	4	¼ Islamic coin			Svanberg 2003b, pp. 213
Finnveden	980-1050	Benestad. Allbo hundred, Aringsås parish RAÄ 16.	7	Melted coin (probably Anglo-Saxon)		10 th -11 th century	Svanberg 2003b, p. 221
Öland		Mellösa. Bredsåtra parish	7	Islamic coin		991/992	Svanberg 2003b, p.250
Öland	1000-1100	Persnäs. Akerbo hundred, Persnäs parish.	10	"German" coin		11th century	Svanberg 2003b, p. 251
Öland	900-1000	Köpingsvik. Slätbo hundred, Köping parish.	Section A 59:2	Islamic coin		809/810	Svanberg 2003b, pp. 252
Öland	Viking Age	Köpingsvik. Slätbo hundred, Köping parish.	Section C	Fragment of Islamic coin			Svanberg 2003b, p. 255
Öland	1000-1100	Köpingsvik. Slätbo hundred, Köping parish.	Section D 4 (1980)	¼ coin		11th century	Svanberg 2003b, p. 256
Öland	1000-1100	Köpingsvik. Slätbo hundred, Köping parish.	Section D 6 (1980)	¼ coin			Svanberg 2003b, p. 256
Öland	Viking Age?	Köpingsvik. Slätbo hundred, Köping parish.	Section D 2a (1979-1980)	Fragmentary coin			Svanberg 2003b, p. 256
Öland	950-1050	Köpingsvik. Slätbo hundred, Köping parish.	Section D 4 (1979-1980)	2 fragments of coin			Svanberg 2003b, p. 257
Öland	Viking Age	Nyttorp. Runsten hundred, Högsrum parish RAÄ 10-11.	6	Fragment of Islamic coin			Svanberg 2003b, p. 260
Öland	850-	Folkeslunda. Runsten hundred, Långlöt parish RAÄ 51-54.	20	Islamic coin		832/833	Svanberg 2003b, p. 262
Öland	950-	Folkeslunda. Runsten hundred, Långlöt parish RAÄ 51-54.	24	Islamic coin		942/943	Svanberg 2003b, p. 262
Öland	950-	Folkeslunda. Runsten hundred, Långlöt parish RAÄ 51-54.	94	Islamic coin		797/798	Svanberg 2003b, p. 262
Öland	Viking Age	Karlevi. Algutsrum hundred, Vickleby parish RAÄ 1-7	1886	Islamic coin		803/504 805/806	Svanberg 2003b, p. 264
Öland	950-	Karlevi. Algutsrum hundred, Vickleby parish RAÄ 1-7	1899 2	Coin (from present day Germany)			Svanberg 2003b, p. 264
Öland	900-1000	Gårdby. Möcklebo hundred, Gårdby parish RAÄ 20, 30.	1844	Islamic coin with a loop			Svanberg 2003b, p. 266
Öland	900-1000	Skarpa Alby. Möcklebo hundred, Sandby parish RAÄ 5-10, 12,13 and 15.	1827	Bracteate (imitating an Islamic coin)			Svanberg 2003b, p. 267
Öland		Hulterstad hundred, Mörbylånga parish.	Non-expertly recovered grave finds	Coin		990-1024	Svanberg 2003b, p. 269
Öland	Viking Age	Bjärby. Hulterstad hundred, Kastlösa parish RAÄ 72-76, 89.	1935 2	Fragment of Islamic coin			Svanberg 2003b, p. 270
Öland		Slagerstad and Södra Kvinneby. Hulterstad hundred, Stenåsa parish RAÄ 66-69, 74, 80, 82-83, 92-93, 97 and 99.	Non-expertly recovered grave finds 1874	Bracteate of silver			Svanberg 2003b, p. 271
Öland	Viking Age	Slagerstad and Södra Kvinneby. Hulterstad hundred, Stenåsa parish RAÄ 66-69, 74, 80, 82-83, 92-93, 97 and 99.	Non-expertly recovered grave finds 1875	Islamic coin			Svanberg 2003b, p. 271
Öland	1000-1100	Alby. Hulterstad hundred, Hulterstad parish RAÄ 114, 115 and 199.	1971-1972 30	2/4 of 2 coins			Svanberg 2003b, p. 272
Öland	1000-1100	Alby. Hulterstad hundred, Hulterstad parish RAÄ 114, 115 and 199.	1971-1972 43	2 fragments from coins		11 th century	Svanberg 2003b, p. 272
Skåne		Norrvidinge. Onsjö hundred, Norrvidinge parish RAÄ 11.	1963-1967 24	Islamic? Coin			Svanberg 2003b, p. 285
Skåne	920-1000	Ingelstorp. Ingelstad hundred, Ingelstorp parish.	35.	Islamic coin		918/919	Svanberg 2003b, p. 296
Bornholm		Munkegård. SØnder hundred, Povlsker parish.		Coin		11th century	Svanberg 2003b, p. 325
Bornholm	975-1100	Runegård. SØnder hundred, Aker parish.	1982-1984 1477.	Coin "Otto-Adelheid coin"		991-1040	Svanberg 2003b, p. 326
Bornholm	11th century	Grødbygård. SØnder hundred, Aker parish.	515 graves, many with coins	Coins			Svanberg 2003b, pp. 326
Bornholm	950-1050	Rabækkegård. Vester hundred, Knudsker parish.		15 Islamic coins		913-943	Svanberg 2003b, pp. 327

Appendix 2: Catalogue of Coins in Graves in Birka

58: (AOT=8) W-E: coffin grave dated to the 11th century. 10 fragments from 3 Arabic coins were placed in the middle of the grave, by the waist.

Finds: a bronze ring clasp, silver pendant, glass bead, remnants of silver ribbon and knot braids of silver, knives, 4 coffin nails, 4 small iron edge fittings, an amber fragment, iron ring.

83A: (AOT=1) W-E: grave-pit dated to the 9th century. ¼ and a fragment of Arabic coins were placed on the pelvis.

Finds: femur head of an ox, 2 burnt bones, unburned bones and some coals.

86II: (AOT=10) SW-NE: coffin grave dated to the 10th century. 2 Arabic coins placed in the chest.

Finds: bronze piece with iron remains, iron weight, amber pendant, cubic carnelian bead, iron knife, iron band, iron buckle, fragment of an iron ring, comb, whetstone, pot shards.

465: (AOT=8) WNW-ESE: coffin grave dated to the 9th century. A fragment of an Arabic coin placed on the chest.

Finds: 2 gilded bronze oval brooches, gilded bronze clasp, bronze bracelet, iron scissors with the temple decorated with bronze plate, iron knife with remnants of the leather sheath and small bronze sheet fragments, a comb with circular ornamentation, nails (awl?), fabric fragments.

467A: (AOT=4) NNW-SSE: coffin grave dated to the 10th century. A fragment of an Arabic coin placed in the waist area.

Finds: cubo-octahedral bronze weight, round iron bronze-clad weight, iron knife, a horn comb, clay pot and a burnt clay piece.

471: (AOT=3) NW-SE: coffin grave dated to the 10th century. ½ of an Arabic coin placed in the waist area.

Finds: iron ring pin, iron knife, an iron weight and iron fragments.

495: (AOT=10) orientation not mentioned. Weapons chamber grave dated to the 10th century. ¼ of an Arabic coin, placed on the temporal-bone of the head.

Finds: spearhead, fighting axe, shield boss, bronze ring clasp with braided ornament, iron knife, whetstone, horn comb, iron nails, silver ribbon and fragments of fabric.

496: (AOT=17) WNW-ESE: weapons chamber grave dated to the 10th century. A fragment of an Arabic coin placed directly to the right of the head.

Finds: sword with a bronze chape partially covered with white metal and vertical silver stripes, spearhead, higher than the sword was a shield boss, silver ribbon and pendant, ring needle both ring and needle covered with white metal, 3 bronze weights, silver ring, whetstone, arrowhead, iron knife, horn comb with case, horse bit made of iron, iron belt buckle, a belt tongue, 2 stirrups, iron cramp, iron ring, 22 small iron pins, small clay pot, an iron horse-nail, fragments of a crude clay pot.

508: (AOT=5) WNW- ESE: coffin grave which is difficult to date. 2 Scandinavian Hedeby coins were placed in the middle of the grave, by the waist.

Find: 2 small oval brooches Carolingian animal ornaments, bronze clasp, iron knife, 77 beads, by the feet were 229 glass beads.

510: (AOT=7) WNW-ESE: chamber grave, with weapons, dated to the 10th century. ¼ of an Arabic coin placed in the waist area.

Finds: shield boss, spearhead, iron tip, bronze buckles, fabric fragment, wooden object, slate whetstone, iron objects, wooden bucket iron fittings, iron box fittings.

517: (AOT=9) WNW-ESE: coffin grave dated to the 10th century. A fragment of an Arabic coin, placed on the chest.

Finds: 2 gilded bronze oval brooches, gilded three-pointed bronze clasp, gold-plated bronze clasp, silver-cross pendant decorated on one side with stamped circles, faience bead, 16 beads, iron scissors, bronze needle case, bronze-plated leather fragment and an iron fragment, iron knife, bronze chain and finely pleated wool fabric.

523: (AOT=13) (WSW-ENE) chamber grave dated to the 10th century. 2 fragments of an Arabic coin placed on the chest.

Finds: two gilded Gotland silver-bracteate 8th century, 2 gold-plated bronze

oval brooches, 2 beads, 20 glass gaming pieces, leather pouch with silver handles, 2 oriental silver pendants, bronze ear spoon, bronze needles, remains of iron nail, faience bead, finger ring, silver ribbon fragment, iron padlock, bronze vessel, wooden bucket, wooden dragon head, wooden bowl, wooden brush, (in the mouth: small ring clasp made of silver, pointed silver wire ring, uncoloured glass bead drawn on a gold wire ring, cross ribbed silver ring, with eyelet and 3 red glass beads, silver pendant with traces of gold plating, filigree-enamelled cast ornament).

524: (AOT= 12) NW-SE: a weapons chamber grave dated to the 10th century. 3 Arabic coins placed on the chest.

Finds: iron sword, fighting axe, 2 iron shield boss, arrowheads, braided gold diadem, board with golden thread, posier work and embroidery, 35 gold foil beads, 15 amber gaming pieces, gold-plated bronze pin, iron knife, 2 slate whetstone, bronzes bowl, fragments of a wooden vessel.

543: (AOT=16) WNW-ESE: Chamber grave dated to the late 9th or 10th century. ½ of an Arabic coin placed on the chest.

Finds: 2 bronze oval brooches, gold-plated silver clasp, round bronze clasp (gold plated), iron bow fitting, row of beads, gold pendant, iron tweezers with bronze handle, 2 iron awl, 4 silver plate fittings, iron scissors, horn comb, iron knife, 2 round iron weights, sulphur gravel ball, soapstone, arrowhead, wooden buckle iron fittings.

550: (AOT=7) (WNW-ESE) a coffin grave dated to the 8th century. A fragment of an Arabic coin placed by the right chin.

Finds: 2 bronze oval brooches, silver clasp, silver pendant, a bead necklace of 23 beads, silver necklace, a row of beads, silver needle case, iron scissors and an iron knife.

557: (AOT=15) WNW-ESE: chamber grave dated to the 9th century. 1 Franconian coin and 1 Byzantine coin placed on the chest.

Finds: 2 bronze oval brooches, rectangular silver clasp, 2 silver wire rings, silver pendant, 100 beads, 2 iron knife, iron ring, iron objects, remains of a horse bit, bronze finger ring, hollow key made of iron, iron bowl, bucket, wooden bucket iron fittings, iron sheets, glass beaker, window glass fragment, amber bead, funnel cup, bronze fitting, slate whetstone, pottery shards, crucible with grey-green glaze, resin piece, iron bucket fittings.

581: (AOT=20) WSW-ENE: Chamber grave with both equestrian equipment and weapons, dated to the 10th century. ¼ of an Arabic coin placed on the chest area.

Finds: iron sword, 2 spearhead, iron axe, 25 arrowheads, 2 shield boss, 2 stirrups, iron knife, slate whetstone, 28 gaming pieces of horns, iron ring pinning or needle, pointed silver fitting, 4 plum shaped silver pendants, bronze bowl, iron ring, large iron buckle, horn comb, horse bit, Iron ring, 4 iron horse nails, iron hook, iron ring with fitting, at least 2 iron box fittings, game board fittings, iron pins, battle knife.

632: (AOT=12) NW-SE: Chamber grave dated to the 9th century. One Byzantine coin, with an eyelet, placed on the chest.

Finds: 2 bronze oval brooches, gold-plated silver belt buckle, iron scissors, iron knife, a spiral-filigree silver button, iron fragment, bronze needle case, bronze bowl, ladle, wood bucket iron handle, iron rod, row of 58 beads with a) Byzantine silver coin, b) silver fitting, c) silver fitting, d) silver object, e+h) 2 beads, f+l) 2 pendants, g) silver cup, i) bead, k) silver cup, m) silver fitting, n+o) 2 shell-shaped silver pendants, p) silver pendant.

639: (AOT=8) W-E: chamber grave dated to the 9th century. 1 Arabic coin placed in the waist area.

Finds: 2 bronze oval brooches, equal-armed silver clasp, 3 silver beads, over the teeth 136 beads, one sandstone bead, iron scissors, bronze nail, iron tweezers, small clay pot, 2 boxes.

644: (AOT=35) NW-SE: double weapons chamber grave, dated to the 10th century. 6 Arabic coins were placed between the two individuals.

Finds: 2 bronze oval brooches, round bronze clasp, small round gold-plated bronze clasp, 2 beads, pyrite crystals, gold ribbon, silver wire and gold sheet embroidery, awl of antler bone, whetstone, iron knife, horn comb, fragments of a leather bag with very thin partly gilded silver plate fittings, iron weight and fire steel.

2 bronze ring clasp, iron sword, spearhead, arrowhead, iron shield boss, battle knife, iron hatchet, 2 iron stirrups, 2 iron belt fittings, 2 iron buckles, iron handle, horn comb, oak box, small glass beaker, 2 fragments of a mirror, 22 gaming pieces, 3 dice, iron scissors, iron knife, slate whetstone, hammer head made of iron, iron object, 4 flint pieces, bit, Iron ring with

cramp, weave comb from horn, bronze pot, wood bucket iron fitting, 5 band-shaped iron fittings, 40 decorative iron nails, clay pot, bag-shaped silver tip of a silk cap, gold diadem.

646: (AOT=3) NW-SE: grave-pit with no exact dating. 2 Hedeby coins with eyelets placed between the clavicles.

Finds: 2 bronze single shelled oval brooches, an equal-armed bronze brooch with “Griffin” ornaments, an iron knife and 2 beads. All placed on the chest.

707: (AOT=9) WSW-ENE: double individual chamber grave dated to the 10th century. 3 Arabic coins placed on the chest of the female individual.

Finds: small silver ring clasp, silver headband, 7-sided glass mirror, 2 weights, spoon shaped silver pendant, 8 beads, iron scissors.

Arrowhead and iron knife.

712: (AOT=5) WSW-ENE: coffin grave difficult to date. A fragment of an Arabic coin placed on the chest area.

Finds: ring-clasp made of bronze, ring clasp or pin, small cubic amber piece, iron knife, 4 band-shaped iron spurs, clay pot, a horse leg.

731: (AOT=17&35) NW-SE: double weapons chamber graves dated to the 10th century. 3 Arabic coins were placed between the two buried individuals.

Finds: iron sword, spearhead, iron shield buckle, bunch of 12 arrowheads, ring needle, silver ring-pin, iron knife, grey slate whetstone, remains of a leather bag sewn together, fragment of a braided silver wire and woollen fabric remnants, gold headband straps, iron fittings to a box.

Gold band of a head dress, 2 oval bronze brooches (gilded), 5 pearls, round silver clasp, round bronze clasp (gilded), iron knife, 2 iron scissors, clay vessel.

Fragments of a leather bag, iron fragments, clay cup, silver finger ring.

735: (AOT=26) W-E: Double individual, weapons chamber grave, difficult to date. 1 Scandinavian coin, with a silver eyelet, placed in the waist area.

Finds: ring clasp of bronze, iron sword, pieces of a chopper, spearhead, shield boss, bronze buckles, remains of clothing.

2 oval bronze brooches (gilded), 55 beads, double conical amber bead, 4 iron knife, iron object, pieces of iron scissors, iron pins and iron tweezers both with a bronze handle formed into a male head and a bronze ear spoon, iron chain, whetstone, 2 iron object, channelled iron fitting, one broken glass mirror, a small piece of silk cloth, bronze bell, forked iron object, 5 round iron weights covered with bronze plate, iron weight coated with bronze plate, an iron nail head and 2 band-shaped iron spurs, pieces of flint, box fittings, iron fittings, glass cup, clay pot, iron horse bridle with straps, iron belt straps, bronze buckles, 2 iron stirrups, horse iron nail.

738: (AOT=8) SW-NE: coffin grave dated to the 10th century. 1 Arabic coin and 2 Scandinavian coins placed on the chest.

Finds: three-pointed bronze clasp, round bronze clasp, 36 beads, fire steel, pieces of flint, 2 iron fragments, small iron knife, band-shaped iron spur, clay pot, iron key.

758: (AOT=8) E-W: coffin grave, difficult to date. A fragment of a silver coin placed on the chest area.

Finds: glass mirror, silver pendant, 2 small bronze wire rings, bead necklace of 98 beads, 2 iron keys, iron handle of a wooden bucket, iron ring, small iron knife, clay pot.

762: (AOT=5) WNW-ESE: coffin grave dated to the 10th century. A fragment of an Arabic coin placed on the chest area.

Finds: round bronze clasp, bronze pendant, iron knife, fragments of a glass mirror, 17 glass beads.

777: (AOT=8) WSW-ESE: coffin grave dated to the 10th century. A fragment of an Arabic coin placed on the chest area.

Finds: round bronze clasp, 2 yellow barrel shaped glassblower beads, needle case, iron key, iron knife, slate whetstone, 2 round iron weights, pieces of flint.

819: (AOT=5) W-E: coffin grave dated to the 10th century. A fragment of an Arabic coin placed on the chest area.

Finds: Bronze ring pin, a solid bronze button, bronze belt bag fitting, iron knife, small clay pot.

830: (AOT= 18) WSW-ENE: Chamber grave with both equestrian equipment and weapons, dated to the 10th century. 3 fragments of an Arabic coin placed on the chest.

Finds: ring clasp of bronze, spearhead, bundle of 18 arrowheads, shield boss, bronze coated iron weight, iron awl, iron knife, iron object, horn comb with sheath, iron ring, iron spike, a pig tooth, iron nail head, 2 stirrups, iron bit, iron disc, iron clatter, belt buckle made of iron, iron buckle, horse iron nail, band-shaped iron spur with traces of wood, an iron ring, 2 iron bands.

832: (AOT=15) WNW-ESE: chamber grave with both equestrian equipment and weapons, dated to the 10th century. One Arabic coin placed on the chest.

Finds: iron sword, 2 spearhead, 2 shield boss, battle knife, ring needle, bronze ring pin, iron knife, a bunch of arrowheads, 4 glass beads, remains of silver ribbons, band remnants, posamentier work, iron fittings of a wooden box, small clay pot, horse's bridle, iron fittings, fragments of a large iron belt buckle, 2 iron rings.

835: (AOT=12) W-E: oriented grave-pit dated to the first half of the 10th century. An Arabic samanid dirhem dated to 911/912 for caliph Isma'il minted in Andarabah and a Hedeby coin (hjort/strålansikte, Malmer B1/A2 (Arwidsson 1989, p. 140)) with Jelling ornament, both with eyelets. The coins were both placed on the chest.

Finds: (1) 2 gilded bronze oval brooches, (2, 5) 2 gilded bronze clasps, (3) between the oval brooches was a shield-shaped silver sheet pendant with a swirl-pattern, a gilded bronze pendant with a Jelling-animal, fragments from a bronze fitting, one silver-sheet cross, a gilded bronze pendant, bronze fragment from a pendant fitting and beads, 2 fragments of a silver pendant with filigree ornament, fragments from an oriental bronze clasp, 2 amber pendants and 25 beads of amber, carnelian, glass, gold foil and silver foil, (4) iron ring clasp, (6) iron scissors with traces of ornate bronze-sheet, (7) iron knife, (8) iron key, (9) 2 weights, one of bronze and one of iron, (10) three-sided iron spur, (11) quarter of a polishing stone from raw glass.

839: (AOT=6) W-E: coffin grave difficult to date. One non-determinable coin, placed on the chest area.

Finds: 2 bronze oval brooches, three-pointed bronze clasp, half a gold foil bead and 2 weights, iron knife, iron ring.

842: (AOT=12) WSW-ENE: chamber grave, with both equestrian equipment and weapons, difficult to date. 1 Arabic coin placed by the feet.

Finds: iron sword, 2 spearheads, shield boss and about 45 edge fittings, 2 iron rings, silver ribbon, 2 iron knives, iron nail, iron fragment, four-sided grey slate whetstone, shards of a clay pot, iron bit, strap fittings of the bridle, 2 straps made of double-bent iron sheet, four-sided iron sheet fitting, iron ring, 4 iron horse nails.

843B: (AOT=5) WNW-ESE: grave-pit dated to the 9th century. 1 Arabic coin with an eyelet, placed on the chest.

Finds: round bronze pendant, 2 four-sided bronze pendants, bronze bracelet, 34 amber beads, spherical sandstone formation, 2 iron knives, iron fragment.

844: (AOT=13) WNW-ESE: coffin grave dated to the 9th century. One gold-plated, Arabic coin with an eyelet, placed on the chest.

Finds: 2 bronze oval brooches, round gold-plated silver pendant, pendant, string of 29 beads and 5 pendants with a square silver clasp, a shield-shaped pendant, silver pendant, fastening hook of silver, iron tweezers, ear spoon, bronze pin, iron knife, 2 round iron weights, fragments of an iron chain, gold ribbon, 2 iron handles of wooden buckets and 20 iron pins of a wooden bucket.

847: (AOT=8) WNW-ESE: coffin grave that is difficult to date. 2 Scandinavian coins (Hedeby-halfbracteates with eyelets) placed on the chest.

Finds: 2 bronze oval brooches, round bronze clasp, iron scissors, iron key, 35 beads, iron casket locks, 2 big faience beads, flint pieces, iron ring clasp, band-shaped iron spur, an iron awl with bronze handle in the form of a male head.

857: (AOT=9) WSW-ENE: coffin grave dated to the 9th century. ¼ of an Arabic coin placed on the chest.

Finds: 2 bronze oval brooches, fabric remains, round bronze clasp, bronze clasp, ring clasp, iron scissors, iron awl or tweezers with bronze handle in the form of a male head, yellow-red barrel-shaped glass bead, iron knife, 2 band-shaped iron spurs, iron fittings of a wooden bucket.

860B: (AOT=11) W-E: chamber grave dated to the 9th century. 1 Arabic coin and 3

Scandinavian coins placed on the chest.

Finds: 2 bronze oval brooches, fabric remains, gold-plated silver mounting, silver pendant, 2 bronze pendants, bronze needle, simple bronze tweezers, bronze awl, 2 spherical beads each drawn on a silver wire ring, black glass bead, glass bead on a thin silver wire ring, bronze pendant, bronze pendant in the form of a man's head, string of 84 beads, bronze awl, knife sheath fitting, mosaic bead, iron knife, flat grey whetstone made of brimstone, wood box iron-fittings.

873: (AOT=4) WNW-ESE: coffin grave dated to the 10th century. A fragment of an Arabic coin placed on the chest area.

Finds: bronze ring clasp, four-sided grey flat slate whetstone, horn comb, iron knife, an iron object with traces of a sheet of decorated bronze sheet.

886: (AOT=15) NNE-SSW: chamber grave with weapons, dated to the 9th century. ¼ of an Arabic coin placed by the feet.

Finds: Iron sword, iron shield boss, iron shield grip, shield fittings, 2 iron knives, iron clamp, bronze ring clasp, 2 round iron weights, fire steel, flint pieces, silver, fragments of a leather bag, 2 band-shaped iron spurs, Iron game board fittings, gold plated silver sheet metal fittings of a wooden bowl, 25 bone gaming pieces, clay pot, silver ribbons around the skull.

943: (AOT=17) W-E: chamber grave dated to the 10th century. 1 Arabic coin and 2 Scandinavian coins. 2 placed on the chest (one or more with an eyelet) and 1 in a small pouch by the left hip.

Finds: 2 bronze oval brooches, 2 round bronze clasps, 19 beads, a group of pendants, silver ribbons and other fabric remainders, fragments of a wooden bowl, silver wire ring, iron scissors, iron awl, iron fragment, round weight, 2 bronze weights, see-ore lumps, iron ring clasp, bronze needle case, four-sided whetstone, 2 iron knives, 2 iron lock fittings, glass bead, 4 band-shaped iron spurs, iron fragment, fragments from a leather bag with iron weight and glass bead, leather- or cloth bag with one bronze clasp, 4 bronze rivets, iron awl, iron ring, amber pendant, 10 unworked amber pieces, brown slate pendant and thorshammer of amber.

944: (AOT=21) WSW-ENE: chamber grave with equestrian equipment and weapons,

difficult to date. One Arabic coin placed on the chest area.

Finds: iron sword, spearhead, shield boss, battle knife, a fitting made of double-bent bronze sheet, bronze end-fitting of a shield grip, iron miniature spearhead or arrowhead, iron ring clasp or pin, 2 iron knives, iron ring, horn comb with gold-plated bronze seem, four-sided grey slate whetstone, flint piece, bronze plated round iron weight, rivet head, fabric remains and silver braids, one silver knot braid around the head?, silver bands and silk fragments, massive bronze buttons, bead, iron ring, 13 iron nails, 2 iron studs, iron mounting, Twice bent iron object, resin piece, iron mounting from a bit, iron mounting, hook-shaped iron device, iron fragment, three-sided double iron mounting, iron object, big belt buckle and iron fittings, horse comb from horn, iron nail, a hook-shaped object, 4 band-shaped iron spurs, remnants of an iron chain, horse iron nail.

954: (AOT=15) WSW-ENE: chamber grave dated to the 10th century. 3 Arabic coins and 1 Scandinavian coin placed on the chest.

Finds: 2 oval brooches, gold-plated three-pointed bronze clasp, bronze ring clasp, silver mounting, shield-shaped silver pendant, 35 beads, iron knife, three-sided amber pendant, glass bead, cubo-octahedral bronze weight, iron key, iron awl, flint piece, iron ring with an iron thorshammer, 2 iron rings, iron ring clasp, 2 iron staples, 2 iron nail, iron thorshammer on an iron ring, horse iron nail, four-sided grey flat slate whetstone, iron length.

957: (AOT=9) WSW-ENE: chamber grave with weapons, dated to the 10th century. One Arabic coin placed on the chest.

Finds: iron sword, spearhead, shield boss, knot braid made of silver, silver ribbons, a square bronze weight, 2 round iron weights, whetstone, iron knife, bronze ring clasp, iron bucket handle, 2 iron ring handle, 1/2 Swine head - neck vertebra and 2 vertebra protrusions.

963: (AOT=16) WSW-ENE: chamber grave dated to the 10th century. 1 Francian coin, 1 English coin and 1 Scandinavian coin placed on the chest (at least one with an eyelet).

Finds: 2 gold-plated bronze oval brooches, round bronze clasp, small round bronze clasp, silver ribbon and fabric remains, 32 beads, shield-shaped silver pendant, 2 crosses with an eyelet, sieve-like bronze object, bronze ear spoon, bronze nail, iron scissors, iron tweezers, iron knife, round iron weight, iron fragment, iron fittings, iron ring handle, amber piece, polish-stone, horn comb fragments.

964: (AOT=14) WSW-ENE: chamber grave dated to the 10th century. One Arabic coin placed on the chest area.

Finds: 2 oval brooches, equal-armed bronze clasp, silver ribbon, iron scissors, cylinder-shaped bronze needle case, iron knife, four-sided grey slate whetstone, round iron weight, iron lump, iron ring, horn comb, clay pot, probably in a bag following: bronze Thorshammer, silver wire garland, glass mirror, glass rod, yellow glasslike lump, unworked amber piece, 2 glass beads, a melted lump of green glass.

966: (AOT=11) SW-NE: chamber grave dated to the 10th century. ¼ of an Arabic coin placed on the chest.

Finds: 2 gold-plated bronze oval brooches, round bronze clasp, bead-necklace with 2 pendants, iron chain, bronze nail, iron knife, iron scissors, 2 fragments of a cylinder-shaped bronze needle case, 2 iron horse nails, fragments of a small bag with spiral silver wires ornament, shield-shaped silver pendant, 2 cubo-octahedral bronze weights, 2 round iron weights, bronze sticks and bead.

967: (AOT=12) WSW-ENE: chamber grave dated to the 10th century. 1 Arabic coin and 2 English coins placed on the chest (gold-plated and with eyelets).

Finds: 2 gold-plated bronze oval brooches, 2 round bronze clasps, bronze pendant, cross, bead, silver ribbon, iron knife, iron weight, iron scissors, iron tweezers, iron needle case, iron fragment, box fittings, bucket handle.

968: (AOT=15) WNW-ESE: chamber grave dated to the 10th century. One Arabic coin, with an eyelet, placed on the chest.

Finds: 2 oval brooches, gold-plated three-pointed bronze clasp, round bronze clasp, bead-necklace with a cross-pendant, shield-shaped silver sheet pendant, woman-shaped silver pendant, silver pendant, bronze pendant, silver ring, 36 beads in a silver ring, silver ribbon, bronze needle case, iron chain, iron key, iron knife, iron scissors, silver finger ring, Iron staple with ring handle, fragments of a leather bag with a bronze nail, bronze weight, iron weight, lead-disc and glass bead.

977: (AOT=11) WSW-ENE: chamber grave, with both equestrian equipment and weapons, dated to the 10th century. ¼ of an Arabic coin placed in the waist area.

Finds: iron sword, iron shield boss, a bundle of arrowheads, iron ring clasp, iron knife, fragment of silver ribbon, round iron weight, iron fitting, wooden buckle iron fittings, 2 band-shaped iron spurs, iron bit, iron horse nail.

978: (AOT=9) W-E: coffin grave dated to the 9th century. 1 Franconian coin with an eyelet, placed on the chest area.

Finds: 2 double-shelled oval brooches, equal-armed bronze clasp, bronze pendant, 62 beads, 2 iron knives, iron nail and iron tweezers attached with an iron chain, iron scissors, horn comb, iron fitting.

991A: (AOT=11) NNE-SSW: coffin grave dated to the 10th century. A fragment of an Arabic coin placed on the chest area.

Finds: spearhead, bronze ring clasp, iron belt buckle, bronze ring handle, wooden fragments, wool fabric remains, thin bronze sheet fragments and leather fragments, round bronze weight, round iron weight, iron knife, five-sided whetstone, fire steel, 7 flint pieces, 3 band-shaped iron spurs.

1007: (AOT=3) WNW-ESE: coffin grave dated to the 8-9th century. 2 quarters of an Arabic coin and a non-determinable coin, placed on the chest.

Finds: bronze ring clasp, four-sided iron rod, iron knife.

1031: (AOT=5) W-E: chamber grave dated to the 9th century. 2 Arabic coins placed on the chest.

Finds: 4 glass beads, iron ring clasp, iron knife, 3 iron pieces, 2 band-shaped iron spurs, wood bucket iron fittings.

1053: (AOT=4) ESE-WNW: chamber grave dated to the 8th century. ¼ of an Arabic coin, placed on the chest.

Finds: shield boss, a bundle of arrowheads, bronze ring clasp, iron knife.

1112: (AOT=1) W-E: grave-pit, difficult to date. A fragment of an English coin placed on the chest.

Appendix 3: Catalogue of Coins in Graves in Hedeby

32: WSW-ENE. (AOT=9) 10th century Coffin grave – 3/4th Hedeby coin - younger Carolingian type (so-called half bracteate), dated to ca 900-920 AD. The position of the coin in the mouth area was proven (Arents and Eisenschmidt 2010a, p. 177).

A nailed wooden coffin with four long fittings, L. 2,1 m, B. 0,9 m.

The skeleton was completely gone. two elongated coffin fittings were placed at the head end in 0.5 m T. (11); 30cm further east, in the area of the neck a silver pearl (4); 20cm south, maybe in the mouth of the dead, a silver coin (10); another 10cm to the east was found oval brooches, probably sitting right and left on the shoulders (1, 2), in between them a fibula converted into a clasp (3); in the region of the right hip was a knife (5), a whetstone (6), keys (8) and perhaps also scissors (7) - attached to an iron chain (9) -; the chain was guided over the body and served at the same time as a belt; at this height, the other two coffin fittings (11) were found.

(1, 2) two gold-plated bronze double shelled oval brooches, (3) Carolingian silver fibula with niello inlays and plant decoration, (4) silver bead, (5) iron knife with wood handle and traces of a leather scabbard, (6) whetstone with a perforation on the lateral side, in it was remains of an iron ring with bronze coating but no signs of wear and tear, (7) corroded on to the whetstone was an iron fragment, possibly of scissors, part of a key or a chain, (8) iron key, between grip and shank sits a profiled sleeve of gilded bronze, (9) ca 1 m long iron chain, (10) 2/3 of a silver coin, a half bracteate minted in Hedeby, (11) 4 long rectangular coffin fittings provided with a rivet hole at one end, (12) tongue-shaped fitting plate, (13) textile - shirt made of fine linen, the needles of the oval brooches were stung through the fabric of the shirt especially for the burial, thereby stretching or tearing it irreparably (Arents and Eisenschmidt 2010b, pp. 29).

33: WSW-ENE. (AOT=1) Coffin grave from ca 1000 AD – one Otto-Adelheid coin of Lower Saxony dated to ca 990/995-1025/1030 AD. Placed next to the left thigh (Arents and Eisenschmidt 2010a, p. 177).

A nailed wooden coffin (at least 20 nails), L. 1.9-2.0 m, B. 0.6 m.

the Skeleton in an extended position; not recovered. On the left thigh was a silver coin.

Finds: coin, silver - very poorly preserved; Otto-Adelheid coin, from lower Saxony (Arents and Eisenschmidt 2010b, pp.30).

167: WSW-ENE. (AOT=1) 8th century grave-pit – one Arabic coin, an abbasid dated to ca 759/760 AD. the position of the coin in the mouth area was proven (Arents and Eisenschmidt 2010a, p. 177).

This grave is only separated from graves 166 and 168 by the depth they were found. The skeleton was in an extended position; and was determined as an adult man. On the right side of the mouth was a coin.

Finds: coin, silver - Abbasid dirham; Calif Mansur; 759/760 minted in al-Kufa (Arents and Eisenschmidt 2010b, p. 63).

849: WSW-ENE. (AOT=1) 10th century Coffin grave – one Hedeby coin -younger Carolingian type (so-called half bracteate) dated to ca 950 AD. The position of the coin in the mouth area was proven (Arents and Eisenschmidt 2010a, p. 177).

A nailed wooden coffin, L. 1.9 m, B. 0.55 m, 18 nails; the coffin was inside a trench system. preserved skull fragments; not examined. Between the teeth, probably in the mouth, was a coin.

Finds: coin, silver - half-bracteate, minted in Hedeby? (Arents and Eisenschmidt 2010b, p.188)

883: W-E. (AOT=1) Coffin grave dated around 900 AD. Caliphate dated to ca 844-902/890-900 AD. Placed in the pelvis area (Arents and Eisenschmidt 2010a, p. 177).

A nailed wooden coffin, L. approx. 1.55 m; Skeleton completely gone. In the center of the grave lay a coin.

Finds: coin, silver - fragment of an Abbasid dirhams; minted after 892 AD. (Arents and Eisenschmidt 2010b, pp. 196).

904: W-E. (AOT= 1) 9th century Coffin grave – one Hedeby Older Carolingian coin -half bracteate dated to ca 825. Placed in the pelvis area (Arents and Eisenschmidt 2010a, p. 177).

An unmarked wooden coffin, L 1.8 m, B. 0.3 m. preserved skulls and parts of the long bones; not examined. There was a coin on the pelvis.

Finds; coin, silver: minting; Haithabu (?); the surfaces are heavily worn (Arents and Eisenschmidt 2010b, p. 200).

H7/07; AOT= No information. Stray finds. Ludwig the Pious coin dated to ca 814-818 AD. the piece is gilded and pierced, so it was probably worn as a pendant

K 2; WSW-ENE. (AOT=10) 10th century Chamber grave – the coin was only mentioned in the excavation report and is no longer detectable. Placed in the chest area (Arents and Eisenschmidt 2010b, p. 177).

Rectangular wooden chamber, L. 3.0m, B. 1.9 m.

within the grave lay - presumably in head and bust height - a fibula (1), three beads (2-4), and a coin with adhering organic remains (12); at about the height of the pelvis there was a knife (6); directly in the SW corner of the chamber stood a bucket (8) to the east of that stood a bronze bowl (9) and to the north a box (10); close to them was a key (7) and by it one found four chain links (11) and remains of a brocade ribbon (15); In the middle of the chamber, south of the casket, near the feet was a layer of "organic materials" (13) and, to the south, a small iron belt frame or ring (5).

Finds: (1) gold filigree disc fibula with a terslev-motif, (2-4) 3 glass beads, (5) iron d-shaped frame with round cross-section, (6) iron knife, (7) iron key with an E-shaped beard with two teeth; short, almost square shaft; drop-shaped, rectangular handle, (8) metal sheathed, slightly conical bucket with a preserved fragmentary iron handle (a), six iron rings (b), opening and border edge sheets (c, d), decorative sheets (e), pieces of sheet metal strips (f) and remains of the staves and the bottom (g, h), (9) bronze bowl, (10) cylindrical wooden box with lockable lid; about 240 iron nails (a), one carrying ring (b), a spring bolt lock with handle (c) and two fitting-fragments (d, e), (11) six parts of an iron chain with at least 10-14 round sections, (12) coin which is impossible to determine since it was lost, (13) organic remains, (14) organic residues in the bronze bowl, (15) fabric fragments, at the bottom of the chamber; powdery textile traces, probably from a loose, fabric of a cover; on three nails (10a) of the round container are leftovers of a very fine woven cloth; possibly fragments from two separate fabrics of traditional garments (shirt and tunic); in the box (10) lay a circular band of round ribbons of approximately seven overlapping sheets, with wefts of flat goldthread; a ring-shaped or cuff-shaped garment, such as a belt, a band end, or a cuff, (16) 2 iron nails (Arents and Eisenschmidt 2010b, pp. 246).

K X; (AOT= 1) probably a 10th century (based on the coin) Chamber grave – 3 fragments of a Hedeby coin - younger Carolingian type (so-called half bracteate) without an eyelet, dated to ca 900-920 AD. Placed in the chest area.